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MARYLAND MEDICAL JOURNAL

Sexually Transmitted Diseases:

New Fronts in an Old Battle

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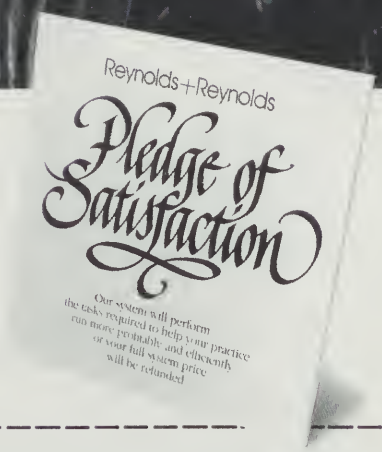
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JANUARY 1987

PROMOTION OF CONDOM USE IN MARYLAND: THREE-FOR-FREE

Condoms are the second most widely-used form of non-surgical contraception in the United States, after the birth control pill, and can be 90% to 98% effective. Additionally, condoms are the only method other than abstinence that is effective in preventing the spread of sexually transmitted diseases (STDs).

Condoms may be ideally suited to preventing pregnancy and disease among a population at high risk: young people having sexual intercourse who have not visited a family planning clinic. A 1980 national survey found the median delay from first sexual intercourse to first family planning clinic visit was 11.5 months (Zabin and Clark, 1981). The same study found that among 1,219 teen women at their first family planning visit, 73.5% had used a contraceptive method at least once. Of those 73.5%, 46% had used a condom at least once.

The good news, then, is that some sexually active teens are using condoms before they make their first family planning clinic visit. This is doubly important since condoms will also help protect them from STDs. The not-so-good news is that we are a long way from universal contraceptive use among teens who have sexual intercourse but want to avoid pregnancy. Over a million teens will become pregnant this year in the United States.

Some of the barriers to more widespread use of condoms among teens relate to their beliefs about condom availability. A 1981 survey of 660 Baltimore junior and senior high school students found that 43% would be too embarrassed to buy any kind of birth control in a store, and 52% believed that a parent's permission is necessary for a young person to buy condoms, contraceptive foam or cream at a drug store (Clark, Zabin and Hardy, 1984).

We cannot estimate just what proportion of sexually active adults may also want to use condoms for protection, but haven't

done so because of possible barriers to acquiring them, such as: cost, embarrassment, lack of knowledge about where to buy them, or confusion over how to choose among different types. Surprisingly, although the AIDS epidemic has created a much larger population of potential condom users, marketing and availability of condoms has changed little, if at all.

In an effort to make condoms more available, the concept of "Three-For-Free" was developed as a collaborative effort between the Maryland State Department of Health and Mental Hygiene's, Division of Family Planning, and the Towson State University Student Health Center. Starting in 1985, any individual can go to the Towson State University Student Health Center and ask the receptionist for "Three-For-Free." The receptionist then asks, "Would you like three or twelve?" Depending on the client's answer, a bag of either three or twelve condoms is handed to them with no further interaction required. Included in the bag are instructions for the most effective use of condoms, and a flyer on other available health services.

As of February 1986, the Division of Family Planning of the State Health Department expanded the program by offering it to county health departments. The purpose of Three-For-Free is to decrease the number of barriers to condom use by making free condoms and instructions available for anonymous pick-up at as many sites as possible in Maryland. The Division will supply condoms and instructions to any local health department's Three-For-Free Program for at least one year from the date that county initiates a program. In return, a designated contact at the local health department provides the Division of Family Planning with quarterly tallies of the number of condoms picked up.

Any number of places can be used to offer the condoms in a county; the actual sites are chosen and negotiated by the local health department contact person. Many counties have started implementation by offering condoms at their main reception desk.

After several months of implementation, it was discovered that more condoms were picked up when the bags were left out on a counter. This new approach is now encouraged at all sites. In addition to health department sites, some programs have also expanded to include a health department drug and alcohol counseling center, a community mental health center, an office of environmental health, a few part-time clinics set up near high schools, a gas station, and some community service agencies. We encourage setting up as many sites as can be negotiated, depending on acceptability in the community and support in the local health department.

Advertising the program is implemented by the local health department contact person and can be done in a variety of ways. Some counties have chosen to just put up flyers in their health department, while others have put up flyers in non-family planning health department facilities and community agencies.

Three-For-Free may provide several benefits in addition to the main goal of decreasing barriers to condom use. The condom instructions that accompany the Three-For-Free condoms are superior to those provided on retail packages; they are more thorough, require a lower level of reading ability (eighth grade), and include illustrations for the most effective use of condoms. For those individuals who come to health departments specifically for Three-For-Free, they benefit by becoming familiar with the site and may feel more comfortable coming in for services in the future. We recommend a list of health department services be included in the Three-For-Free packet to promote and advertise health department services. Finally, implementing Three-For-Free has resulted in some increases in communication and cooperation among staff locally in family planning, STD, and other locally-based programs.

As of December 1986, Three-For-Free condoms are available in fourteen counties, including: thirteen county health departments; five social service agencies; three Maryland universities; the Baltimore City Health Department Family Planning and STD Clinics; and six other community family planning clinics in Baltimore City.

Levels of activity vary from site to site. For example, from July through September, 315 condoms were picked up from the Cecil County Health Department, 1,065 from the Howard County Health Department's six sites, and 147 from Talbot County Health Department's two sites.

We encourage other sites to contact the Division of Family Planning (301-225-6726) if interested in sponsoring a Three-For-Free Program.

Submitted by Therese McCluskey, M.P.H., Community Health Educator, Division of Family Planning.

REFERENCES:

(From S. Clark, L. Zabin and J. Hardy, "Sex, Contraception and Parenthood:Experience and Attitudes Among Urban Black Young Men." Family Planning Perspectives, March/April 1984, 16 (2): (77-82).

(From L. Zabin and S. Clark, "Why They Delay:A Study of Teenage Family Planning Clinic Patients." Family Planning Perspectives, September/October 1981, 13 (5):205-217).

VOLUNTARY PARTNER NOTIFICATION AND REFERRAL FOR HUMAN IMMUNODEFICIENCY VIRUS (HIV) ANTIBODY POSITIVE PERSONS

It has long been thought that a targeted approach to disease intervention would provide the greatest positive impact on those at risk. In the case of Acquired Immune Deficiency Syndrome (AIDS), the targeted approach might best be directed at those exposed to persons who have been tested and found to be positive for HIV antibody. Furthermore, the first notification of that exposure is best accomplished by the person who is sero-positive.

This statement is the basis for a new prevention initiative against AIDS. The Division of AIDS Prevention will introduce this program of voluntary partner notification and referral early in 1987. In it, a person who is found to have HIV antibodies will be encouraged to notify his or her sexual or needle partners voluntarily and urge them to seek information and counseling about safer sex and needle practices. The HIV sero-positive will be given a packet of information providing encouragement, including a motivational message, some basic AIDS and HIV facts, and a comprehensive directory of resources available. The entire packet is functional for both parties involved. In particular, the resource information will benefit the HIV sero-positive, as well as the partner. With this material, an infected person can provide a partner with necessary information through the network of available services.

The Division of AIDS Prevention will distribute the materials to private health care providers likely to order HIV antibody testing. Physicians and health care professionals will now be able to offer HIV sero-positive persons a complete referral system. In addition, it is an opportunity for the physician to influence the patient's decision to notify their partners. The patient/doctor rapport greatly enhances the ultimate use of the materials presented. However, physicians only need spend enough time with an HIV sero-positive to ensure that the patient understands.

Partner notification and referral is an important approach to precisely targeting prevention information. If properly encouraged by the health care provider, the patient will find the best time and place to inform a partner.

We trust that your co-operation can be counted upon in this effort. For more information, contact Jim Coan, Special Projects Coordinator, at (301)-225-6707.

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As the patient's coping mechanisms are gradually rebuilt, social skills training and vocational rehabilitation are introduced. Moreover, our family psycho-educational program helps the family understand the illness and prepares them for their role as the patient's most important source of support.

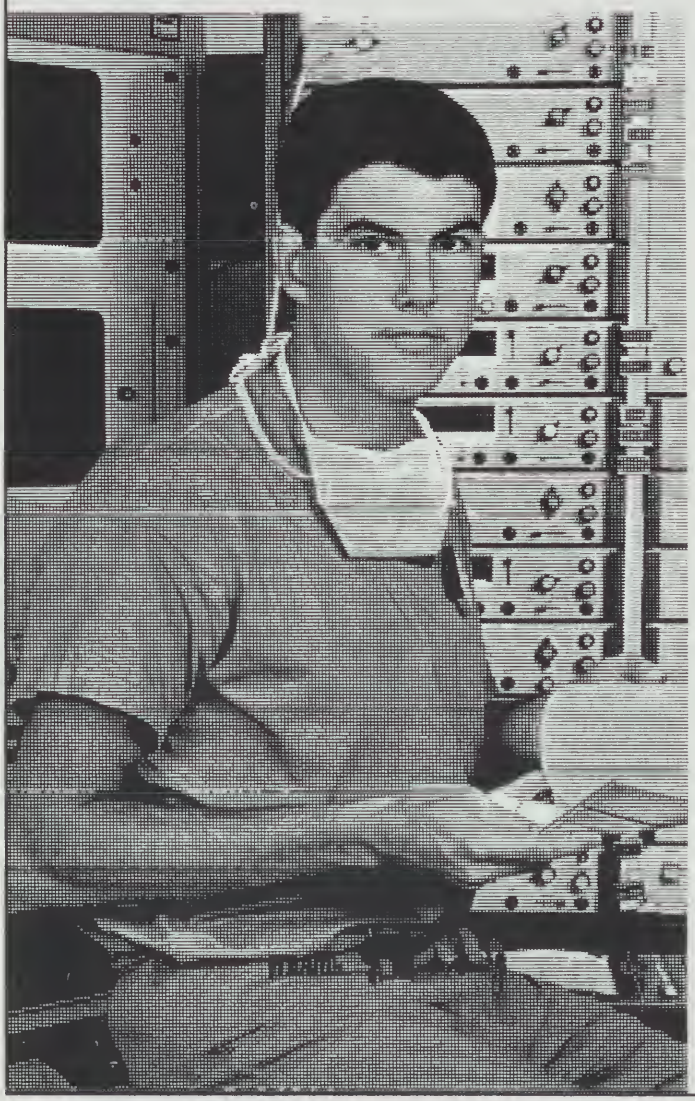
Our goal is simple: to bring all the latest, proven techniques available to bear in the treatment of chronic schizophrenia, so that we can tailor an intensive effort to meet each patient's specific needs.

If you would like to know more about the Sheppard Pratt approach to chronic schizophrenia, contact Dr. Barry Rudnick, Director of Admissions, Sheppard and Enoch Pratt Hospital, P.O. Box 6815, Baltimore, MD 21204. (301)823-8200 or 1-800-482-7800.



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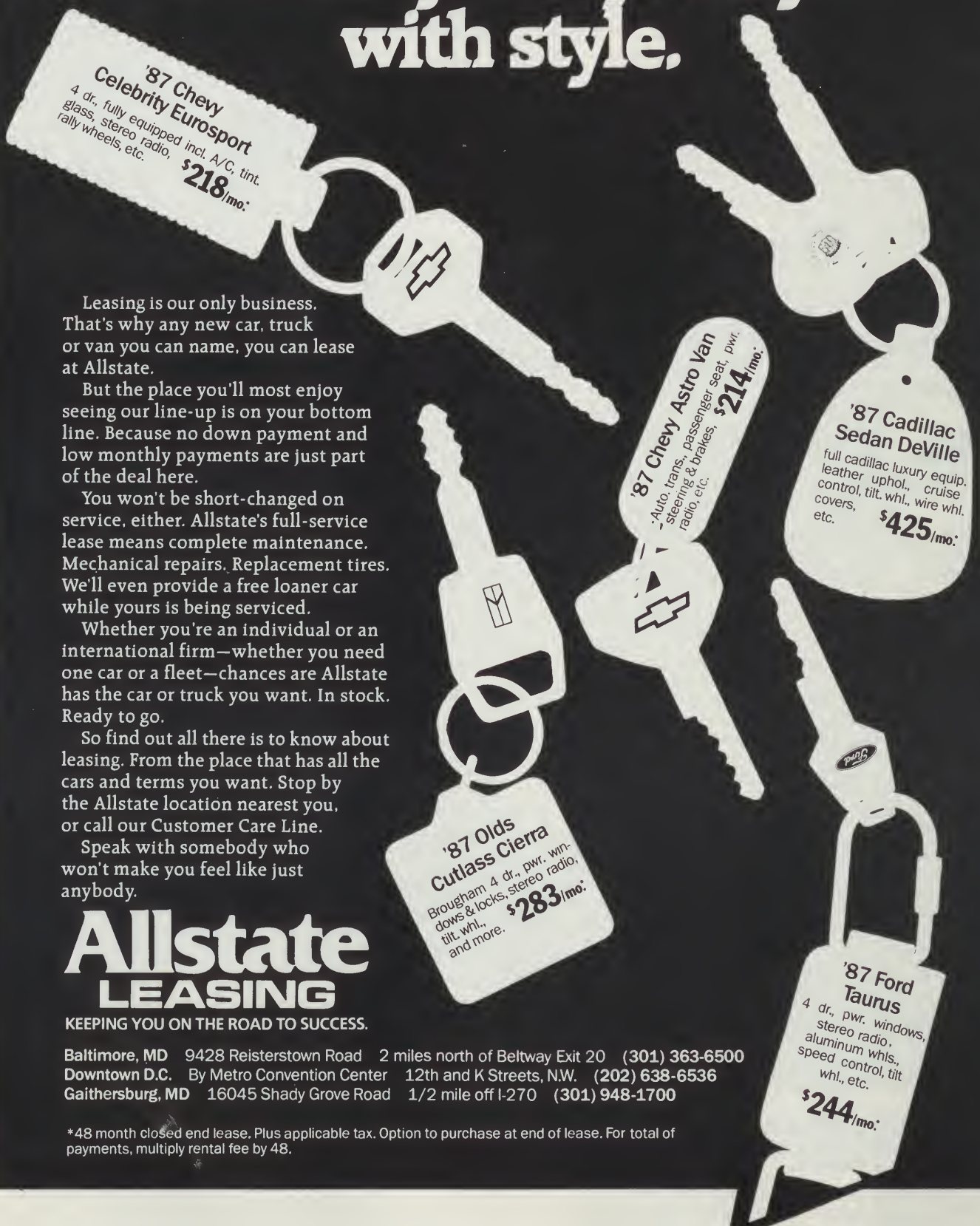
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Executive Director's Newsletter

January 1987

BC/BS CLARIFICATION

The announcement regarding the Blue Cross/Blue Shield Major Medical Policy, which appeared in the December Executive Director's Newsletter, affects only BC/BS of Maryland participating providers. It does not pertain to BC/BS of the National Capital Area nor Pennsylvania BC/BS.

MEDICAL MUTUAL UNDERWRITING

Recent efforts by Med-Chi's Executive Committee have resulted in a change in Medical Mutual's underwriting policy. At the request of a Faculty member, we questioned Medical Mutual's refusal to underwrite the physician because that physician was currently insured through another company, until the natural expiration date of that policy. As a result, the physician was unable to purchase insurance from Medical Mutual early enough to minimize ever-increasing tail coverage.

Due to the Executive Committee's intervention and the special efforts of J. Roy Guyther MD, Medical Mutual has "opened a window" from December 15, 1986 to March 15, 1987 during which physicians can switch over to Medical Mutual before the natural expiration of their current policies. Physicians should contact their insurance agents for further information.

1987 LEGISLATIVE PLAN

The 1987 Legislative Plan, submitted by Legislative Committee Chairman Israel Weiner MD and Director of Government Relations, Gerard Evans, has been approved by the Executive Committee. It includes clearly deliniated duties and responsibilities for the Government Relations Department staff as well as the officers of Med-Chi.

It is anticipated that Governor-elect Schaefer will introduce a legislative package including bills dealing with medical malpractice reform. Dr. Weiner and the Legislative Committee are looking forward to working with the proposed legislative program.

FIRST AID ROOM

Once again, Med-Chi is sponsoring the First Aid Room in Annapolis. We have maintained a health suite in the state capitol during the legislative session continuously since 1964. The room is open to the legislators, their staff, and the public for the 90-day session. Physicians donating a day at the facility have the opportunity to meet with their legislators and learn the legislative process.

Anyone wishing to participate as Physician of the Day during the 1987 Legislative Session from January 14 through April 13 may contact Diane Sakwa at 301-539-0872 or 1-800-492-1056.

RESOLUTIONS DEADLINE

Resolutions to be considered by the House of Delegates at its Annual Meeting on Friday, May 1, 1987 must be received in the Faculty office by FRIDAY, MARCH 6, 1987.

MALPRACTICE BROCHURE AVAILABLE

A new brochure designed to help you educate your patients about the growing malpractice crisis in Maryland is now available free of charge. To order brochures for your office, call or write Wanda Griebel, Med-Chi, 1211 Cathedral Street, Baltimore, MD 21201; 539-0872 in Baltimore or 1-800-492-1056 elsewhere in Maryland.

If you are a member of the Baltimore City, Baltimore County, Montgomery County or Prince George's County Medical Society, you may order brochures directly through your component organization.

MUTUAL FIRE MARINE INSURANCE COMPANY

The Insurance Commissioner's office has asked us to relay the following information to Faculty members: "We have been advised by the Mutual [Fire Marine and Inland Insurance Company] that the Pennsylvania Insurance Department has agreed to approve the Mutual's requests for disbursement of reasonable fees for claim related services rendered on or after June 13, 1986."

Accordingly, physicians currently involved in malpractice litigation should be able to retain the services of a defense attorney.

INSURANCE CONSUMER ADVISORY

This is a reminder of a consumer advisory issued by Insurance Commissioner, Edward Muhl, last year regarding a company based in Kingstown, Saint Vincent, West Indies known as PRIME or Professional Risk Insurers Management Exclusive Company Limited. Prime is an unlicensed insurer offering medical malpractice insurance in Maryland at a fraction of the customary rates for comparable coverage. PRIME is not certified by any state insurance commissioner in the United States. Physicians entering into contracts with PRIME do so at their own risk.

CPT-1987

Physicians' Current Procedural Terminology (CPT-1987) is available through Med-Chi. These codes are used by many private insurance and Medicaid carriers as well as the federal government for Medicare Part B. Price is $30 per copy. To order the CPT-1987, send a check made payable to the "Med-Chi Library" ATTN: CPT order.

ANNUAL MEETING

The 189th Annual Meeting of the Faculty will be held Wednesday, Thursday, and Friday, April 29, 30 and May 1, 1987 at the Omni International Hotel in downtown Baltimore. Watch your mail for an advance program.

Angelo J. Troisi
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Sexually Transmitted Diseases: New Fronts in an Old Battle

The Center for Health Education, Inc. (CHE) presents this issue of *MMJ* in cooperation with Med-Chi's Ad Hoc Policy Advisory Committee on AIDS. This issue provides the latest information on the extensive health hazards associated with sexually transmitted diseases and is designed to improve understanding of these diseases as well as to allay physician concerns associated with the diagnosis, treatment, and care of individuals who may have a sexually transmitted disease (STD). These articles underscore the need for compassion, not only for those with disease but also for those who are concerned about acquiring a sexually transmitted disease.

The guest editors recognize that while we live in an age of great medical confidence about the control of human disease, medical technology has not advanced far enough to conquer some diseases. This is the case with AIDS. Physicians, however, are in an ideal position to make progress in curtailing the spread of sexually transmitted diseases.

The introductory article by John C. Hume MD, DrPH provides a historical overview of the various approaches to the prevention and control of infectious diseases and draws some parallels with sexually transmitted diseases.

The next four articles by B. Frank Polk MD, Justin C. McArthur MBBS, Cleto Di Giovanni MD, and John P. Johnson MD provide the update on the "Epidemiological and Clinical Aspects," "Neurological Aspects," "Psychiatric Aspects," and "Pediatric Aspects," respectively, of the Human Immunodeficiency Virus (HIV).

In the next two articles, Diane L. Matuszak MD, MPH, *et al.* present information about HIV Antibody Testing, and Kenneth B. Morgen PhD reviews the implications of counseling HIV positive patients. Edward N. Brandt, Jr., MD follows with a summary of the work of the Governor's Task Force on AIDS.

The next several articles provide overviews of some other prevalent sexually transmitted diseases. Edward W. Hook, III, MD reviews the diagnostic and therapeutic issues associated with gonococcal infections. Judith C. Lovchik PhD calls attention to the serious complications and sequelae of untreated chlamydia infections. Pelvic inflammatory disease and infertility is the subject of the next article by Judith N. Wasserheit MD. Thomas C. Quinn MD and Janet Horn MD review Viral STDs—Herpes Simplex and Human Papillomavirus. Highlighting STDs in the gay male is the subject of the next article by Bernard M. Branson MD.

The concluding article by Frank T. Flannery MD, JD *et al.* presents a review of the legal aspects of sexually transmitted diseases. A listing of community resources is provided by Gary W. Wunderlich and Scott H. Stamford to assist physicians and their patients with AIDS and STD information, referral, and counseling.

We call your attention to a Quiz on Sexually Transmitted Diseases (page 86) developed by the Center for Health Education, Inc. Completion of this quiz will enable you to receive CME credit.

We thank the authors for their contributions to this issue of *MMJ* and the members of Med-Chi's Ad Hoc Policy Advisory Committee on AIDS. A special thanks to Diane L. Matuszak MD, MPH and Diane M. Dwyer MD for their assistance in planning this special issue. We would also like to thank the Department of Health and Mental Hygiene, Office of Disease Control and Epidemiology, and the Health Education Resource Organization for their interest and support in planning and preparation. Our special thanks to John B. DeHoff MD, former chairman, and J. D. Drinkard MD, chairman, Med-Chi's Ad Hoc Policy Advisory Committee on AIDS.

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These articles may not necessarily reflect the opinion of the Center for Health Education, Inc. or its sponsoring organizations, the Medical and Chirurgical Faculty of the State of Maryland, and Blue Cross and Blue Shield of Maryland.



CHE

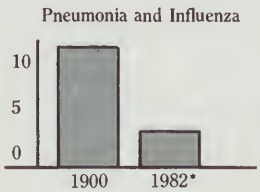
Center for Health Education, Inc.

The Center for Health Education, Inc., a non-profit organization, was established on April 12, 1982 to be a resource to physicians in enhancing their disease prevention and educational skills. CHE is a joint venture of the Medical and Chirurgical Faculty of the State of Maryland (Med-Chi, the State Medical Society) and Blue Cross and Blue Shield of Maryland.

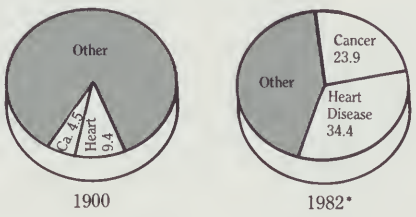
The concept for CHE originated with Med-Chi physicians who recognize that traditionally, medical education does not emphasize the skills physicians need to successfully educate their patients. This concept was supported by Blue Cross and Blue Shield of Maryland, which acknowledges that successful patient education can have a positive impact on the utilization of health services.

Physicians and Disease Prevention

Physicians have been in the forefront of influencing the dramatic decline in premature deaths caused by infectious diseases.



Physicians can be just as effective today. Perceived by the public as the best and most reliable source of health messages, physicians can have a substantial impact on those lifestyle behaviors which, more so than ever before, significantly contribute to the causes of avoidable morbidity and premature mortality such as heart disease and cancer.



In addition, physicians are in a position to personalize their advice for the individual patient, as well as reinforce those recommendations over time.

Source: National Center for Health Statistics

Education for Health

Patient education is a process that provides people with information, encouragement and help in adopting healthful lifestyles and adhering to medical advice.

The use of patient education strategies and techniques can result in:

- increased compliance to medical advice
- positive changes in lifestyle habits
- improved patient satisfaction
- fewer broken appointments
- fewer complaints about medical care

Functions

RESEARCH: Assess physicians' needs in disease prevention and health promotion, their current practices and the obstacles they encounter in the educational process.

DEVELOPMENT: Design physician education materials and programs to increase physicians' awareness, skills and expertise in patient education.

IMPLEMENTATION: Disseminate materials and conduct Continuing Medical Education programs to assist physicians in educating patients.

Accreditation

CHE has been found to meet the Essentials of Accreditation necessary to grant Continuing Medical Education credits for the American Medical Association's Physician Recognition Award.

Governing Body

CHE is governed by a seven member Board of Directors with representatives from both the Medical and Chirurgical Faculty and Blue Cross and Blue Shield of Maryland:

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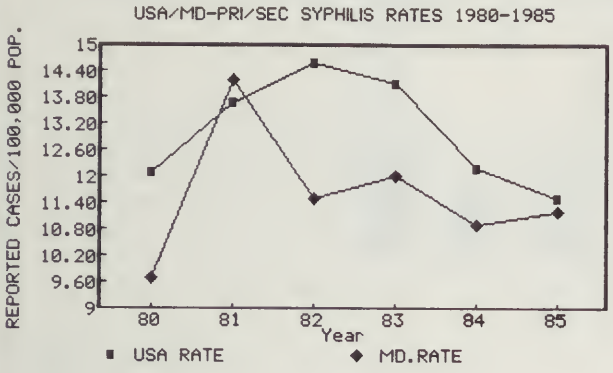
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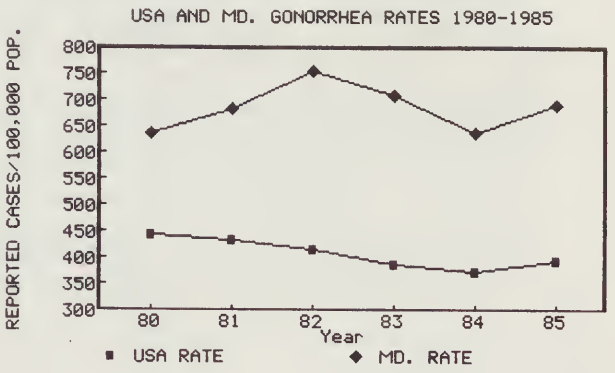
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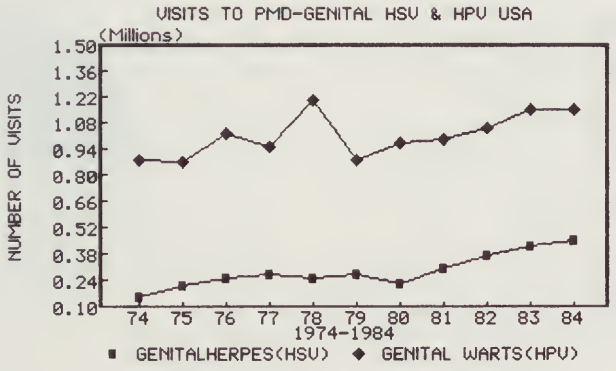
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Source: State of Maryland, Department of Health and Mental Hygiene, Division of Sexually Transmitted Disease



Source: Centers for Disease Control, Sexually Transmitted Disease Statistics, 1984

PELVIC INFLAMMATORY DISEASE(PID)

Analysis of national surveys indicates that:

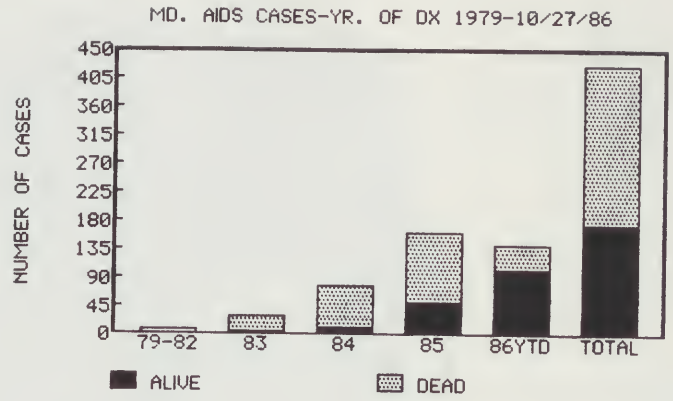
- more than 1,000,000 cases of PID are diagnosed and treated each year;
- more than 276,000 women between the ages of 15-44 are hospitalized with PID each year, of these women, 42% are less than 25 years of age and 83% are younger than 35;
- of the 276,000 women hospitalized, more than 40% are subject to major surgical procedures, including hysterectomies.

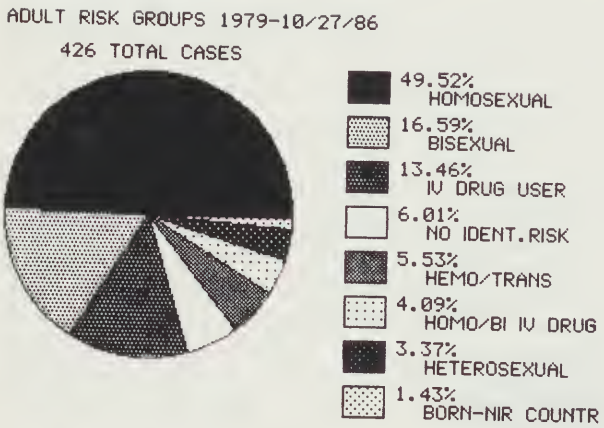
Source: Division of Sexually Transmitted Diseases/Centers for Disease Control, 1985

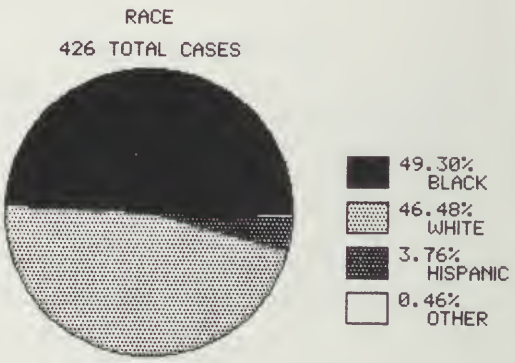
CHLAMYDIA(CHY) in Specific Study Groups

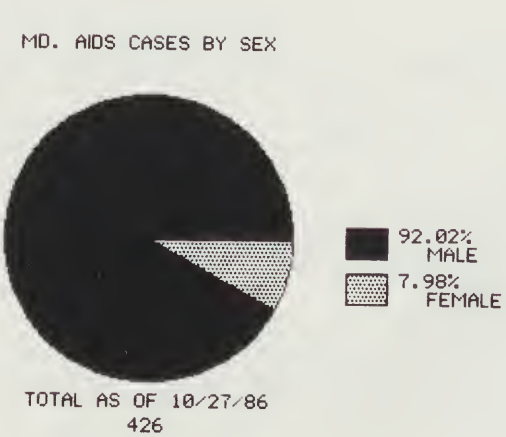
Study Group	% Test Positive
Female sex partners of men with CHY	70
Female sex partners of men with GC	36
Female sex partners of men with NGU	30 - 40
Male sex partners of women with MPC or PID	25 - 50
Heterosexual men with gonorrhea (GC)	15 - 30
Women with GC	25 - 50
Pregnant women	2 - 37
Patients tested for CHY at STD Clinics	20 - 30
Patients tested for CHY at Youth Clinics	8 - 26
Patients tested for CHY at Fam.Plan.Clinics	6 - 23
Diagnosed cases of PID	25 - 50

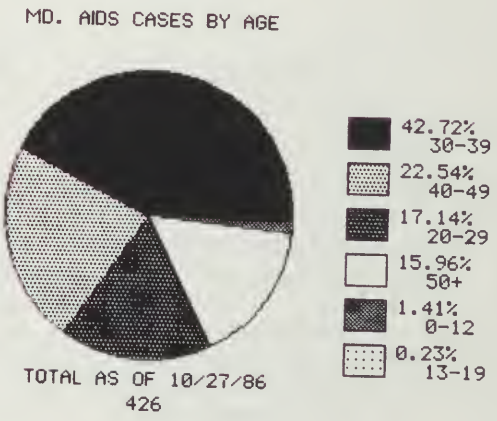
Source: Centers for Disease Control, Chlamydia Trachomatis Infections, Policy Guidelines for Prevention and Control, August 1985.











Source: State of Maryland, Department of Health and Mental Hygiene, Division of AIDS Prevention

Prevention and Sexually Transmitted Diseases

JOHN C. HUME MD, DrPH

The past five or six years, since the general recognition of the acquired immune deficiency syndrome (AIDS) as a serious sexually transmitted disease, have provided a fascinating recapitulation of the history of infectious diseases and society's reactions to them. While our knowledge of these diseases, their etiology, transmission, management and control has advanced remarkably over the period of recorded history leading to more rational interventions, the human species still retains its deep-seated fear of the unknown and can react almost hysterically to previously unrecognized threats.

Dr. Hume is Dean Emeritus, The Johns Hopkins University School of Hygiene and Public Health; and Professor Emeritus, Health Policy and Management.

For millenia, disease in general was considered to be God's punishment for sin, which might be visited upon individuals or communities. The earliest recognized societal actions having favorable effect on the health of the public were related to cleanliness, such as the emphasis placed on adequate water supplies, baths, drainage, and excreta disposal by the Minoan civilization as far back as 5000 B.C. The next several centuries saw the introduction, especially by various religious groups, of several new elements, including dietary prohibitions, circumcision, the promotion of monogamous or monandrous societies, and the segregation of lepers. However, one must be wary about concluding these were inaugurated with the belief they would curtail the incidence of disease.[1]

Despite the belief that sin was the basic cause of disease, it gradually became recognized that association with individuals or groups of "sinners" could lead to the spread of certain diseases. The first definite, large-scale societal efforts to control the spread of disease came with the introduction of the quarantine laws in the fourteenth century A.D. These were the result of the great epidemics of cholera and plague and the realization that by keeping the bearers of the diseases out of a community, that population might be spared and the fear of the diseases and their dire economic consequences could, to some extent, be allayed. At that time there were many serious endemic infectious diseases which, over time, probably levied an even greater toll than did the epidemics. Since they were less dramatic and generally recognized as an unwelcome but inevitable burden, they were less a cause of fear and concern.[1]

That this human attribute has not changed markedly is evident from our society's rather placid acceptance of automobile accident morbidity and mortality and of the sad consequences caused by the complications of gonococcal and chlamydial infections in the female. This is in stark contrast to our response to the Legionnaires' disease epidemic in Philadelphia, the relatively rare reactions to pertussis vaccine or, most recently, the AIDS problem. In this instance, there have been unfounded, if to some extent understandable, efforts to segregate individuals with AIDS and laboratory evidence of exposure to the human immunodeficiency virus (HIV)* and there has been a marked reversal of the trend toward increased societal tolerance of male homosexuality.

Reporting of infectious diseases to authorities began with the advent of the quarantine laws. However, the first formal use of statistical methods to analyze the effect of disease on the overall welfare of a community were published by John Graunt. His analysis of the "Bills of Mortality" for London for over 30 years appeared in 1662 and showed the relationship between mortality rates and the prevalence of specific diseases. Somewhat similar analyses of data for Boston were published in the United States by Shattuck in 1850. However, it was not until the 1870s that reporting of the more important contagious diseases began to be required by local Boards of Health. As regards the STDs, California became the first state to require reporting of cases by number in 1911. Other states followed suit, gradually but reporting was limited to the five so-called classical venereal diseases. The proportion of cases reported until relatively recently is believed to have been less than 20 percent.[1,3]

The first publication setting forth the "germ theory" of the causation of disease was *De Contagione* by Hieronymus Fracastorius in 1546. This discussed agents called seminaria that could be spread by contact, by fomites, and by air. It was well recognized by much of the public that such diseases as gonorrhea and syphilis could be spread by sexual contact. However, even at this relatively late date, the hold of the medieval church was strong, and experimental science was yet to be born. Individuals with inquiring minds who explored nature were in some jeopardy if they published observations that appeared to controvert the current dogma. They therefore tended to be most cautious or devious in reporting such findings. Throughout the Reformation this was particularly true of the literature regarding the STDs, which were held to be the wages of sexual transgressions. Hence, there were societal and religious pressures on individuals to lead a monogamous, heter-

* The Executive Committee of the International Committee on Taxonomy of Viruses has endorsed this name for the retrovirus implicated as the cause of AIDS to replace the terms human T-cell lymphotrophic virus Type III (HTLV III) and lymphadenopathy-associated virus (LAV).[2]

osexual existence.[4] While this undoubtedly did have some favorable influence in curtailing the spread of STDs, this type of "educational" approach was and continues to be something less than a total success. In fact, fear of temporal "punishment" is a much more potent force than that of spiritual retribution as evidenced by changes in sexual behavior, especially among women, following the availability of the pill and among some groups of male homosexuals since the advent of AIDS.

It was only eighteen years after the publication of *De Contagione* that the Paduan anatomist Fallopius wrote advocating the use of a linen sheath over the penis during intercourse to prevent the spread of disease. Somewhat surprisingly, the use of condoms as a contraceptive did not appear in print until early in the eighteenth century when bawdy verses were published in England. The actual origin of condoms is not known though there is some suggestion in early Egyptian art that they were used in that civilization. Undoubtedly many materials were used over time, but the first commercially available condoms were made from animal intestinal membranes and were widely used in Europe starting in the 1700s. These tended to be somewhat unreliable in their effectiveness, and the mass production of high-quality condoms awaited the development of the latex rubber manufacturing process in the 1920s. Even after mass production of condoms became a reality, they were not always readily available in the United States because in most states they could be sold "for the prevention of disease only." Their source was limited to registered pharmacists, and sale to minors was prohibited.[5]

Another approach to prevention of STDs, starting in the early sixteenth century was the therapy of early syphilis to heal the lesions. While this was primarily for the benefit of the patient, it soon became recognized that it contributed to the prevention of transmission.[4,6] Even today a major cornerstone of STD control programs is the early diagnosis and treatment of individuals with diseases for which specific, effective therapy is available.

It is not surprising that the earlier favorable experience with variolation and introduction of vaccination for smallpox by Jenner in 1798 raised the hope that similar agents could be found that would be effective in preventing other diseases. Syphilis was not overlooked in the search, and a series of experiments started in the 1840s by Auzias-Turenne attempted to show that inoculation could prevent or ameliorate the course of the disease. The early reports were sufficiently promising that the French legislature considered a law requiring the inoculation of the youth of the nation. Fortunately, it was rejected, and later studies totally discredited this attempt at "syphilization."[1,7]

The foregoing superficial overview of some of the earlier approaches to the prevention of STDs illustrate that we are still using the same general concepts. Rational and effective methods of control had to await the identification of etiologic agents and an understanding of their microbiology and host-agent interactions. Since the identification of *Trichomonas vaginalis* by Donné in 1836 and of *Neisseria gonorrhoeae* by Neisser in 1879, our acquisition of knowledge has moved forward at a remarkably increasing tempo. Technological advances now allow us to accomplish in months or in a few years things that until recently required centuries or decades. Improved diagnostic methods and therapeutic agents are developed almost on a monthly basis and the future looks bright. However, many important desiderata continue to elude us. The only available safe and effective active immunization for a sexually transmissible disease is that for hepatitis B, and passive immunization, that for hepatitis A. Truly effective therapies for the viral STDs have not as yet appeared on the scene. Consequently, current control strategies vary from one disease to another. Furthermore, the number of agents recognized as being sexually transmissible continues to expand, as is shown in the Table.

One can summarize the content of today's STD control programs as follows.

Health Promotion Activities

The goals are to decrease promiscuity; to encourage the use of prophylactics; to instill in individuals a sense of responsibility for seeking medical attention if they believe they may have been exposed or if suspicious signs or symptoms appear and for protecting others from acquiring a disease or from the complications if infected; to ensure that competent clinical and epidemiological management of the STDs is available; and to encourage adequate support of appropriate research.

An approach is to inform the public about STDs, their symptoms, signs, and sequelae. This can be accomplished through media, pamphlets, "hot-lines," talks, etc., sponsored by official health agencies and voluntary organizations. Many states also have developed excellent curricula on these diseases including information on the transmission and natural history of the major STDs as well as avoidance and prophylaxis. In areas where these are adopted, teacher-training programs on the subject have been developed.

Professional education is another important component directed at clinicians, laboratory workers, nurses, and those responsible for contact interviewing and tracing. Unfortunately, shortly after World War II when "penicillin had practically eradicated syphilis and gon-

orrhea," medical and other health professional schools greatly reduced the amount of information regarding the STDs to which the students were exposed. Whereas "VD courses" had been required in most medical schools, they became elective, usually not too popular, and were frequently dropped entirely. The Division of Sexually Transmitted Diseases of the Centers for Disease Control has attempted, in cooperation with health departments and universities, to rectify this through the establishment of regional training centers. These have as their initial objective the training of clinicians working in settings where STD patients are seen. The Division also has attempted to introduce better educational programs in medical schools through grants in support of faculty members who are specialists in the field. Continuing education programs for practitioners have been sponsored by federal, state, and local health agencies; universities; and voluntary organizations. Maryland physicians will be familiar with Baltimore's Regional Training Center and the continuing education opportunities organized by the City Health Department and the two medical schools. An excellent publication, *Sexually Transmitted Diseases Treatment Guidelines*, 1985, is available from most public health agencies.[8]

Patient education is one of the most important elements. It can be rewarding since one is dealing with an individual at known risk, who has a disease and is usually worried about it. Time spent in informing the patient about the disease and its sequelae, the importance of compliance with the therapeutic regimen and returning for tests of cure, how to avoid reinfection, the obligation to see that contacts are located and examined, and how to avoid exposing others while still infectious can pay tremendous dividends. For this to be effective the clinician must know the sexual preferences and practices of the patient since appropriate medical advice will be influenced to some extent by these factors.

Possibly the opportunity least-often grasped relates to the prevention of reinfection. Emphasis on the avoidance of sexual relations with individuals with jaundice, skin lesions, or genital discharge can be helpful to many patients since it never may have occurred to them to make a point of observing partners. The virtues of condoms and lubricants also should be pointed out to both heterosexual patients and homosexual patients. The barrier aspects of the condom are clear, but many patients have not considered the reduction in trauma resulting from the use of lubricants. The use of bactericidal and/or viricidal contraceptive jellies as the lubricant adds even more protection; some homosexual males have adopted this technic.

The responsibility of a patient for his partners' protection should be stressed. Many patients are reluctant

Table. Partial List of Sexually Transmissible Diseases

1. **Classic Venereal Diseases**
   - * a. Syphilis (*Treponema pallidum*)
   - * b. Gonorrhea (*Neisseria gonorrhoeae*)
   - * c. Chancroid (*Haemophilus ducreyi*)
   - * d. Lymphogranuloma venereum (*Chlamydia trachomatis*, Types L1, 2, 3)
   - * e. Granuloma inguinale (*Calymmatobacterium granulomatis*)
2. **Other Bacterial Infections**
   - * a. Genital chlamydial infections (*C. trachomatis*, Types D-K)
   - ** b. *Gardnerella vaginalis*
   - ** c. *Mycoplasma hominis*
   - d. *Ureaplasma urealyticum*
   - e. Streptococcus B
   - f. Shigella
   - g. Salmonella
   - h. *Campylobacter* spp.
3. **Fungal Infections**
   - ** a. Candidiasis (*Candida albicans*)
4. **Viral Infections**
   - * a. Herpes simplex virus, Type 2
   - * b. Genital warts (human papillomavirus)
   - * c. Molluscum contagiosum
   - * d. Acquired Immune Deficiency Syndrome (AIDS)
   - ** e. Epstein-Barr Virus (infectious mononucleosis)
   - ** f. Hepatitis B
   - ** g. Herpes simplex virus, Type 1
   - h. Cytomegalovirus
   - i. Hepatitis A
5. **Protozoa**
   - * a. *Trichomonas vaginalis*
   - b. *Giardia lamblia*
   - c. *Entamoeba histolytica*
6. **Nematodes**
   - a. *Enterobius vermicularis*
7. **Ectoparasites**
   - a. Scabies (*Sarcoptes scabiei*)
   - * b. Crab lice (*Phthirus pubis*))

** 8. **Nongonococcal Urethritis and Vaginitis**

* Most commonly sexually transmitted.
** Often sexually transmitted.

to inform their contacts, especially their spouses, of their infections. This can usually be overcome by calm and persistent counseling, especially if the unfortunate sequelae of unrecognized and untreated infection are known. This is particularly true in male patients with gonorrhea or nongonococcal urethritis. Most have no concept of the gravity of the complications of gonococcal and chlamydial infections in the female. Since to them it is usually a readily apparent problem that, with appropriate therapy, is little more than a temporary inconvenience, they assume the same is true of the opposite sex. When the differences are explained, many become much more concerned and cooperative.

Most public health clinics are staffed to assure reasonably good patient education. Unfortunately, many physicians expend the bulk of their educational effort on patient compliance with much less going toward prevention of reinfection and the identification and location or reporting of contacts.

Alteration of Host Susceptibility by Immunization

The major effort here is directed at the encouragement of research designed to develop safe, effective, and inexpensive immunizing agents. As mentioned previously, this element of the program at present, in terms of actual application in the United States, is confined to active immunization against hepatitis B and passive immunization for hepatitis A. As regards the former, the proportion of individuals at high risk who have availed themselves of this protection is disappointingly low. Despite the fact that its safety has been well established,[9] the fear of acquiring AIDS has undoubtedly been a major deterrent in its acceptance.

Legislation and Regulation

All states have laws and regulations regarding the reporting of infectious diseases. While all require the reporting of syphilis, gonorrhea, chancroid, lymphogranuloma venereum, granuloma inguinale, and AIDS, there is no great consistency to reporting other STDs. An increasing number of states and cities require reporting of chlamydial infections, hepatitis B, genital herpes, and AIDS-related conditions. While Maryland does not require that herpes be reported, Baltimore does.

Other laws of importance are those allowing the treatment of minors without notification of parents; the licensure and periodic evaluation of laboratories and the requirement that they report positive laboratory tests; and mandatory use of silver nitrate or appropriate antibiotics to prevent ophthalmia neonatorum. Most states still have laws requiring the diagnosis and treatment of suspected or known cases although active use of this police power generally is considered counterproductive. The premarital and prenatal blood test laws, still common in many states, are, in fact, a highly desirable part of good medical practice. The once-popular law requiring periodic testing for syphilis of special groups (such as foodhandlers, barbers, and beauticians) have largely disappeared. A real, inverse relationship between the size of federal appropriations and incidence rates for syphilis and gonorrhea can be demonstrated. Also of importance are those laws relating to the regulation of drugs, reagents, and appliances to assure their safety and effectiveness.

Diagnostic and Treatment Facilities and Services

All state and most large city health departments provide a variety of laboratory services for public and private clinics and hospitals and practitioners. Maryland's State Laboratory traditionally has made available a broader spectrum of services than most, periodically publishing a *Physician's Guide to the Use of the State Laboratory* outlining the services available and how the practitioner may use them. Among the STDs for which the laboratory can perform diagnostic tests are syphilis, gonorrhea, chlamydial infections, herpes, cytomegalovirus, chancroid, hepatitis B, and AIDS. It should be pointed out that the State and Baltimore City Health Departments work with physicians to make certain that darkfield examinations are performed on patients suspected of having primary or secondary syphilis. The laboratories of the Centers for Disease Control work with the State to provide additional services including the diagnosis of more unusual infections. Joint efforts of state and federal laboratories in training laboratory personnel and in evaluation and licensure of laboratories have done much to improve the quality of work done in Maryland and throughout the United States.

Clinical services also are provided throughout Maryland. Every health jurisdiction will make available, through clinics or contract physicians, free diagnosis, therapy, and epidemiologic investigation to individuals seeking such assistance. Furthermore, physicians can secure advice on the management of patients with or suspected of having STDs through the state or local health departments.

Under certain circumstances drugs are available from health departments. For example, in the United States the only source of pentamidine, used in patients with *Pneumocystis carinii* infections (not infrequently complicating AIDS) who fail to respond to trimethoprim-

sulfamethoxazole, is the Parasitic Drug Service of the Centers for Disease Control.

Case-finding Activities

These activities can be divided into two approaches: the epidemiologic approach and screening. The former consists of interviewing patients for contacts and the location, examination, and (if necessary) the treatment of the contacts. This has been most successful in relation to primary and secondary syphilis, the information regarding contacts tending to be more accurate and complete because of the short time covered by the interview and the relatively long incubation period of syphilis. Employing this approach with the tremendous number of patients seen with gonococcal, chlamydial, and trichomonal infections and other STDs, is sometimes very difficult. All patients should be encouraged to notify their partners and to direct them to medical attention. The health department will take any information provided and attempt to get in touch with contacts by mail, phone, or visits.

Patients with pelvic inflammatory disease, disseminated gonococcal infections, and those infected with penicillinase-producing *Neisseria gonorrhoeae*—and their contacts are intensively investigated. These approaches are routine in public health STD clinics. In many areas the health department will provide such services to public or private hospital clinics and be of assistance to practitioners on request. Obviously, these activities must be followed up by a careful clinical evaluation and appropriate therapy. In addition to treating diagnosed cases, it is good medical practice to give prophylactic therapy to definite sexual contacts of primary and secondary syphilis, gonorrhea, nongonococcal urethritis, trichomoniasis, and genital chlamydial infections.

Screening has been used for several purposes. Primarily, it is used to uncover previously undetected cases of a disease for which effective therapy is available. Probably the most successful such program has been the gonococcal culture screening of women presenting themselves for medical care in any setting where pelvic examinations are performed: STD, family planning, obstetrical and gynecological clinics, private practices, etc. It is noteworthy that the male to female gonococcal infection rates have fallen from 3.1 per 100,000 in 1963 to 2.9 in 1970 and 1.5 in 1984. Rates for males were unchanged during that same period.[10]

Current programs for screening military personnel or potential blood donors have other purposes. The latter is clearly aimed directly at the prevention of transmission of AIDS through blood or blood products. The former, in addition to its obvious health and economic applications, has been helpful in giving leads as to the distribution of the disease and should provide a better understanding of the natural history of HIV infections, such as the proportion of infected individuals who develop AIDS-related conditions or AIDS.

Prophylaxis

There are several approaches to the prevention of transmission of STDs by prophylaxis. First is the use of condoms. There is ample evidence that when properly used this is an effective method. Unfortunately, condoms are not as widely used in the United States as desirable. The most common reasons given being impairment of pleasure, lack of availability, "forgotten at the moment of opportunity," or "under the influence of alcohol." Not much emphasis has been placed on promotion of their use. Some evidence indicates this practice is changing. STD clinics provide patients with condoms free of charge, and there is increasing emphasis on its use in educational programs.

Local application of chemicals and antibiotics also has been used widely as a prophylactic measure as has been mentioned in connection with the prevention of ophthalmia neonatorum. Another approach is the use of spermicidal jellies or foams that have as their active components bactericidal and viricidal agents.[11-13] These are effective in reducing the risk of infection and are even more helpful when used in conjunction with condoms. It should be noted that the spermicide nonoxynol-9 has been found to inhibit HIV *in vitro*.[11] Unfortunately, another study[12] has shown that this is not the case for *C. trachomatis*, though its possible effectiveness *in vivo* is not ruled out.

Continued research designed to find more effective and acceptable prophylactic methods is important. We await (though not with bated breath) the availability of a pill of nondescript and innocent appearance that all sexually active persons can carry with them at all times and that is safe, costs about a penny, and is 100 percent effective in preventing all STDs when taken before or shortly after intercourse.

Other Factors Contributing to Prevention

Probably the most commonly used framework for discussing control of infectious diseases is in terms of efforts directed towards the host, the agent, and the environment. All the elements previously discussed are directed at the host or agent. Efforts toward environmental changes are not an integral part of STD control, but any societal actions resulting in improved social, economic, and educational conditions; in the integration of individuals into normal social patterns; or in the

strengthening of the family almost inevitably will result in the amelioration of the problem.

Summary

In a short six years, with the help of modern technology and knowledge developed over several centuries, AIDS has been recognized as an infectious disease. A specific virus associated with its etiology has been identified and propagated, and practical tests for detecting antibodies to it have been developed. Its major routes of transmission have become reasonably well understood. Its age, sex, race, and geographic distribution are rapidly becoming known. The host-agent interactions and the natural history of the infection become more clear on an almost daily basis. While no effective therapy or vaccine is on the immediate horizon, the intensive research efforts directed toward this end provide hope that success will be achieved on one or both of these fronts in the relatively near future. The Coolfont Report provides an excellent summary of the progress made, the obstacles remaining, and the steps to be taken that will solve this national problem.[14]

The deficits in our therapeutic and immunization arsenal are not limited to AIDS. While the technics and new concepts developed in the study of AIDS will be helpful in work with other agents, it would be unfortunate if, in our frantic efforts to address the problem of AIDS, we diminished our work with other serious health problems to which we have become more accustomed and of which we are less frightened.

It is true that clinicians in certain specialties will inevitably see more individuals with an STD, however, the diseases are so widespread that few clinicians will have a clientele totally devoid of these infections. It is important that all practitioners retain a "high index of suspicion" in the management of their patients.

One can make a real contribution to the control effort by keeping abreast of developments in the therapy and diagnosis of the STDs; by reporting them; by educating patients regarding the diseases, compliance with treatment regimens, and the prevention of infection; and by taking advantage of the services and information available from public health agencies.

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Epidemiologic and Clinical Aspects

B. FRANK POLK MD

The acquired immunodeficiency syndrome (AIDS) is a deadly disease caused by infection with human immunodeficiency virus (HIV; formerly called HTLV-III/LAV). HIV infection has several unusual features: it is a new virus (perhaps a mutant of a related retrovirus in old world monkeys in Africa) that causes persistent infection, produces profound cellular immunodeficiency in a variable proportion of infected persons, and results in highly varied clinical manifestations after a long incubation period. AIDS, the end-stage of this prolonged infectious process, has been operationally defined as the presence of a reliably diagnosed opportunistic infectious disease or opportunistic neoplasm that signals an underlying deficiency in cell-mediated immunity in a person with no known cause for the deficiency.

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The first cases of AIDS were recogized in the U.S. in early 1981. Since then, the number of cases in the U.S. has grown rapidly, passing 27,000 cases in November 1986. The Centers for Disease Control (CDC) projects a cumulative total of 270,000 cases by the end of 1991. Cases have been reported from approximately 90 countries, with especially high rates in central Africa, Haiti, Brazil, and parts of the U.S. Five states (NY, NJ, FL, TX, and CA) account for about 85 percent of U.S. cases. This nonrandom distribution is related to the distribution of groups at risk for HIV infection, and to where HIV probably was introduced into the U.S. population in the mid to late 1970s.

In the U.S., 73 percent of AIDS cases have occurred in gay or bisexual men, 17 percent in intravenous drug users (IVDUs), 2 percent in recipients of contaminated blood transfusions, 2 percent among heterosexual contacts of someone in a high-risk group, 1 percent in hemophiliacs, and 5 percent in others. Among the latter, perhaps one third are immigrants from hyperendemic countries (Haiti, central Africa) and a majority of the remainder are found after reinterview to belong to one of the high-risk groups listed above. This pattern has remained stable for many months, suggesting that no new routes of transmission have emerged.

Generally, there are four routes of HIV transmission: sexual, through needles, through blood or blood products, and from infected mothers to their infants. Most sexual transmission in the U.S. has occurred during male-to-male homosexual activity, with over 95 percent of the attributable risk associated with receptive anal intercourse. The relatively high efficiency of this activity is related to the following observations: semen contains many lymphocytes, especially if the man also is infected with cytomegalovirus or perhaps some other sexually transmitted agents. Certain lymphocytes, called T-helper lymphocytes or CD4 lymphocytes, bear receptors for HIV and, indeed, harbor the virus (which is largely cell-associated). When semen from an HIV-infected man is deposited in the lower intestinal tract during an activity that is always traumatic, it is relatively easy for HIV infected T-lymphocytes to enter the bloodstream of the receptive partner, male or female. HIV can be transmitted heterosexually but apparently with notably lower efficiency than between gay male sex partners. Epidemiologic data so far available strongly suggest that male-to-female heterosexual transmission is considerably more efficient than female-to-male heterosexual transmission. Recent data confirm that heterosexual anal intercourse is riskier for women than is heterosexual vaginal intercourse. Data from Africa suggest that the presence of other STDs such as syphilis or chancroid, which interrupt the integrity of the skin or genital mucosa, may increase the risk of transmission of HIV during heterosexual vaginal intercourse. However, that data may be seriously confounded by frequent exposure to therapeutic injections with unsterilized equipment and seriously culturally biased by failure to report accurately the details of sexual activities.

HIV is transmitted by needles in the U.S. and in lesser developed countries. In the U.S. this transmission occurs between and among IVDUs who share needles and syringes, frequently in places called "shooting galleries." In poor countries such as Haiti and Zaire, it is probable that much HIV transmission is attributable to the medical and paramedical reuse of inadequately sterilized needles and syringes.

HIV can be transmitted through blood and blood products. However, since April 1985, all blood donated in the U.S. is screened for antibody to HIV. Repeatedly positive blood is discarded. Members of high-risk groups have been asked not to donate blood. As a consequence of all these efforts, the blood supply is safer than ever, and the proportion of AIDS cases resulting from blood or blood product transmission will shrink steadily. In lesser developed countries that cannot afford to screen all donor blood, the risk is likely to increase.

HIV-infected mothers transmit the virus to their infants. While the data are relatively sparse, they suggest that much of the transmission may occur early in gestation, with the virus crossing the placenta and infecting the fetus. The probability of maternal-fetal

transmission may be in the range of 15 to 30 percent. It is possible that some transmission occurs peripartum and even postpartum through breast milk. Further studies of maternal-fetal transmission are urgently needed.

The reservoir for HIV is the human population; the virus is not found naturally in other animals. It has been isolated from numerous body fluids, but only semen, blood, breast milk, and vaginal secretions have been implicated in transmission, and the latter two, uncommonly. Following infection, seroconversion occurs between two and twelve weeks. At the time of seroconversion, perhaps 50 percent of infected persons will have a mild, brief infectious mononucleosislike syndrome of fever, malaise, headache, tender lymphadenopathy, and (perhaps) a rash. Subsequently, infected persons will remain seropositive, asymptomatic carriers of HIV for months to years. With progressive decline in number of T-helper lymphocytes, infected individuals develop one or more of a variety of clinical manifestations that constitute the AIDS-related complex (ARC). These manifestations include generalized lymphadenopathy, thrush, fever, diarrhea, weight loss, and thrombocytopenia. Then, with further depression in the immune system, opportunistic infections and/or neoplasms will appear. Opportunistic infections include *Pneumocystis carinii* pneumonia (PCP), oroesophageal candidiasis, cryptococcal meningitis, central nervous system toxoplasmosis, disseminated cytomegalovirus infection (especially retinitis), disseminated *Mycobacterium intracellulare* infection, *cryptosporidiosis*, and invasive *Herpes simplex virus* infection. The most common neoplasms are Kaposi's sarcoma and non-Hodgkins lymphomas, frequently in the brain.

The incubation period, defined as the period from infection to the diagnosis of AIDS, is long. It is estimated that the median incubation period is four to five years, with a range of six months to fifteen years. Currently available data suggest that the attack rate of AIDS among HIV-infected persons is 3 to 4 percent per year, at least for the first three to five years of infection. Given the long incubation period and the fact that we are still early in the AIDS epidemic, it is difficult to estimate what proportion of persons infected with HIV will *ultimately* develop AIDS, but estimates of 50 percent or greater over a period of ten years are plausible. In addition to AIDS, recognition of dementia as a result of CNS infection with HIV is growing. Perhaps a third or more of patients with AIDS will have notable dementia before they die. Following the diagnosis of AIDS, 80 percent of patients die within two years and 100 percent within five years.

There currently is no available effective therapy for HIV infection. Azidothymidine has been shown to decrease the mortality rate in a subset of AIDS patients (those with PCP), but it is myelosuppressive and not yet widely available. There is no vaccine to prevent HIV infection in susceptible persons and it is unlikely there will be within five years. Consequently, the only effective public health strategy is to reduce the rate of transmission of HIV through educational interventions designed to reduce high-risk activities. It is the responsibility of all physicians to help in this educational campaign.

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Neurological Aspects

JUSTIN C. McARTHUR MBBS

Neurological disorders have been increasingly recognized in association with Human Immunodeficiency Virus (HIV) infection, occurring in up to 70 percent of patients with AIDS. A variety of pathological changes within the spinal cord have been observed, and several types of peripheral neuropathies may occur, some in the earliest stages of HIV infection and some only emerging with the full-blown AIDS syndrome. This article provides a succinct overview of the more common neurological manifestations of HIV infection.

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While the overall prospects for treatment of HIV infection have improved only slowly with the introduction on new antiviral agents, some of the neurological manifestations, if recognized early, may be responsive to specific treatment. It is important for the practicing physician who cares for individuals with HIV infection to be aware of and alert for such disorders (Table 1).

The most prevalent viral infection is AIDS Related

Dementia (ARD). It is evident that 50 to 70 percent of patients with AIDS will develop a clinically apparent dementia, and autopsy series suggest that 70 to 90 percent have subacute encephalitis, pathological evidence of HIV infection. The clinical syndrome occurs in all groups at risk for HIV infection, including children in whom the CNS involvement is manifest as microcephaly and delay or loss of developmental milestones.[1] In adults, initial symptoms include apathy, inertia, and withdrawal. With progression, difficulties with learning, memory, and language accumulate. In the terminal phase of the syndrome there is global deterioration in cognitive functioning, often with severe psychomotor retardation and mutism.[2]

ARD may progress extremely rapidly over a few weeks or months with death finally occurring from inanition, decubiti, or aspiration pneumonia. Accompanying neurological signs include increased tone, hyperreflexia, and grasp reflexes. The pathological findings include scattered inflammatory (microglial) nodules, multinucleated giant cells, and both focal and diffuse white matter rarefaction.[3] HIV has been identified within the brains of individuals with ARD[4,5] and probably is the cause of the syndrome. The development of ARD, therefore, has powerful implications for the use of antiviral agents since they must penetrate the CNS to be effective.

As yet there is no treatment for ARD, but there are strategies that may be helpful for patient and family. Unnecessary use of sedatives or antidepressants may provoke or exaggerate delirium.

The nonviral or opportunistic infections reflect the underlying immunoincompetency of the individual with HIV infection (Table 2). Individuals with AIDS may have multiple concurrent opportunistic infections, and a wide range of organisms have been identified. The two most common are:

1. Cerebral toxoplasmosis—*Toxoplasma gondii* is an intracellular protozoa causing multifocal CNS abscesses, affecting up to 30 percent of individuals with AIDS.[6] The most common presentation is with fever, seizures, altered mentation, and focal neurological signs.[7] Serological tests are rarely helpful in the diagnosis,[8] however, CT scans typically show contrast-enhancing lesions surrounded by edema. Magnetic Resonance Imaging (MRI) is more sensitive in detecting lesions not apparent on CT scan. Biopsy may be necessary to differentiate from lymphoma or PML, or in

Table 1. Viral Infections in AIDS

Viral Infection	Prevalence (percent)	Diagnosis	Treatment
AIDS-related dementia	50–70	MRI/psychometrics	Symptomatic
Acute atypical meningitis	5*	CSF	Symptomatic
H. simplex encephalitis	2	CT/CSF/EEG/biopsy	Acyclovir
H. zoster radiculitis	3	Tzank test/CSF/isolation	High-dose acyclovir
CMV retinitis	5	Ophthalmologic exam	DHPG+
Progressive multifocal leukoencephalopathy (PML)	2	CT/biopsy	None

* Estimated figure (exact prevalence unknown).
+ DHPG experimental study drug – dihydroxy-propoxymethyl guanine.

Table 2. Nonviral Infections in AIDS

Nonviral Infections	Prevalence (percent)	Diagnosis	Treatment
Toxoplasmosis	up to 30	CT/MRI/Biopsy	Pyrimethamine + sulfadiazine
Cryptococcal meningitis	10	CSF cryptococcal antigen/India ink	Amphotericin B
Other fungal infections	1–2	CSF culture	Amphotericin B
Tuberculous meningitis	2	CSF AFB culture	Appropriate antibiotics
Bacterial meningitis	4	CSF culture	Appropriate antibiotics

other atypical cases. Prompt treatment with pyrimethamine and sulfadiazine will produce clinical improvement in 70 percent,[7] although side effects including vomiting, cytopenia, and rash are frequent. Clindamycin (Cleocin) and trimetrexate, an experimental folate antagonist, are under study. Steroids should be avoided unless the abscesses are producing marked mass effect intracranially.

2. Cryptococcal meningitis—*Cryptococcus neoformans* is a ubiquitous yeast that may produce a chronic meningitis with fever, headache, meningismus, and altered mentation. Lumbar puncture is essential for diagnosis, and cryptococcal antigen assay is highly predictive.[9] The yeast forms are identifiable by India Ink preparation, but cell count and protein may be normal. Treatment consists of amphotericin B (.4 to .6 mg per kg per day) and toxicity is common. Clinical improvement may occur; however, there is rarely complete clearance and relapse is frequent. Home maintenance therapy with a Hickman catheter is increasingly used.

Among other prevalent manifestations of AIDS (Table 3) are neuropathies and myelopathies.[10] Among asymptomatic seropositives or patients with ARC, inflammatory demyelinating polyneuropathies (IDP) have been observed, either presenting acutely as Guillain-Barré syndrome or presenting more chronically as a progressive weakness. These syndromes are uncommon, and immunopathogenic mechanisms may be involved rather than direct damage by HIV. Several patients presenting with IDP have been treated with plasmapheresis and/or steroids.[11,12]

More common is the development of a painful sensory neuropathy (PSN) manifest by acral dysesthesias and paresthesias in 30 percent of patients with AIDS.[6,13] Amitriptyline (Elavil), 25–50 mg qhs, may alleviate some of the discomfort, and vitamin supplements should be used.

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Table 3. Other Manifestations

Other Manifestations	Prevalence (percent)	Diagnosis	Treatment
Painful sensory neuropathy	30*	Nerve conduction velocities	Symptomatic
Myelopathy	20*	Clinical/Pathological	None
CNS lymphoma	5	CT/MRI/Biopsy	Radiotherapy
Metastatic lymphoma	2	CT/MRI/Biopsy	Chemotherapy

* Estimated figures (exact prevalence unknown).

Psychiatric Aspects

CLETO Di GIOVANNI MD

Neuropsychiatric disorders accompany all stages of HIV infection and contribute to its morbidity and mortality. As HIV disease progresses, new psychiatric signs and symptoms may appear including adjustment disorders with depression and anxiety; more significant depression with anhedonia, feelings of hopelessness, and psychomotor retardation; dementia that can mimic major depression and can begin long before the patient develops AIDS; and delirium with bizarre behavior, hallucinations, and delusions. Management of these patients is best achieved through a combination of psychopharmacology and supportive psychotherapy. Psychopharmacologic agents must be prescribed carefully because of potential drug interactions and side effects.

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Human immunodeficiency virus (HIV) produces a spectrum of conditions, ranging from asymptomatic infection to acquired immunodeficiency syndrome (AIDS). Psychiatric disorders occur throughout this spectrum. At times, these disorders may be more disabling to the patient than his HIV infection or its associated illnesses; for example, the asymptomatic person who recently learned that he has serologic evidence of HIV infection may develop such severe anxiety that he is unable to work or study. At other times, these disorders may complicate medical management of the patient; the person with AIDS-related complex (ARC) or AIDS who has major depression, hallucinations, delusional thinking, or dementia may not comply with his medical treatment (including diet) and may strain the resources and tolerance of his family or friends who provide home care for him.

A variety of psychiatric disorders can appear in the same patient within a few months as his underlying illness progresses and provokes alterations in mood, cognition, and perception of reality. The appearance of new psychiatric signs and symptoms may provide an early warning of HIV disease progression and should not be dismissed as "understandable" because a person is "worried" about his health. These changes in mental status may require prompt and thorough medical or neurologic as well as psychiatric evaluation.

Patients with HIV infection may have preexisting major mental illness or personality disorders that progress concurrently with their infection or may be exacerbated by it. They may also develop new mental disorders independently of HIV infection, for example, schizophrenia. Among approximately 150 persons evaluated and treated for psychiatric disorders directly associated with HIV infection at The Johns Hopkins Hospital since 1983, the most common problem was disturbed mood (depression, anxiety, or both) resulting from difficulty in adjusting to their illness or knowledge of infection. These adjustment disorders tended to occur in newly diagnosed carriers of HIV, in persons with ARC who were worried about possible progression to AIDS, and in persons whose first manifestation of HIV infection was full-blown AIDS. (For homosexual men who are asymptomatic HIV carriers, knowledge of HIV serologic status may be unnecessary to alter sexual behavior[1] and may, instead, provoke an adjustment disorder.)

More serious depression, with anhedonia, social withdrawal, hopelessness, and psychomotor retardation, also frequently occurred and was sometimes difficult to distinguish from AIDS dementia[2–4] without specialized studies (neuropsychological testing[5] and either head computerized axial tomography or magnetic resonance imaging). Apathy toward personal and professional responsibilities was a common feature of major depression and, in our experience, also was the most prominent early clinical symptom of dementia. A few persons infected with HIV developed dementia early in their illness and died with profound cognitive impairment without meeting the current diagnostic criteria for AIDS. Delirium was also common among ARC and AIDS patients; alterations in behavior and onset of hallucinations or delusions were often more noticeable than fluctuating levels of alertness. "Mini-mental state" examinations[6] were useful in assessing delirious patients.

Optimal treatment for most HIV-infected patients with psychiatric disorders consists of medication combined with supportive psychotherapy. These patients have a stigmatizing illness and face an uncertain future. They need to resume fulfilling, productive activities and to achieve emotional balance quickly; medications such as antidepressants, antianxiety drugs, and neuroleptics (for psychotic patients) often can speed up recovery from their psychiatric disorder. In prescribing psychotropic drugs for patients with HIV infection, one should remember these patients are frequently at increased risk for drug side effects, including delirium, because of disease involving several organ systems. Some possible drug side effects, for example, thrombocytopenia, need to be distinguished from similar manifestations of HIV disease. It is wise to begin with small

doses of psychotropic drugs, similar to those given elderly patients, and increase them gradually until desired clinical response is achieved or therapeutic serum levels indicate further improvement is unlikely.

If antidepressant medication is apt to be too slow or to produce unwanted side effects, psychostimulant drugs,[7,8] or electroconvulsive therapy may be useful in a few patients. Terminal patients who are delirious, demented, or psychotic for some other reason are often helped by small amounts of a neuroleptic drug to enable them to interact more appropriately with their loved ones during the final hours or days of their lives. Any psychotropic drug may also cross-react with other agents being used by the patient, and their prescribing, therefore, should be carefully coordinated with the physician who has overall responsibility for the patient's care.

Issues that need to be addressed in psychotherapy include the patient's uncertain prognosis, restricted sexual practices for the indefinite future, stigma and shame, and self-blame (especially in homosexual men who have not yet accepted their sexual orientation). Other issues include the patient's fear of loneliness and abandonment, and his decreasing independence (and self-respect) as his ability to care for himself diminishes. Thoughts of suicide are frequent (although few patients act out on them) and need to be recognized and addressed aggressively, often in sessions involving the patient's family and other significant persons.

Aggressive medical monitoring of persons with HIV infection can promote anxiety and precipitate or exacerbate emotional illness. Medically stable symptomatic patients can be evaluated every 3 to 4 months and asymptomatic seropositive patients on an "as needed" basis.

Mental status changes in persons with HIV disease can be subtle or gross, rapid in onset or slowly and insidiously progressive. While still relatively well, the patient may employ denial mechanisms about the future course of disease that make it difficult to address such issues as resuscitation in the event of cardiopulmonary arrest and the preparation of wills and property deeds. At a late stage of infection, the patient's competence to handle these issues may be incomplete. It is the responsibility of the physician to help steer patients through this difficult time, yet to address fundamental ethical and legal questions while the patient is still able to do so. The physician can be of service by recording the patient's mental status and testamentary capacity at the time the patient executes important legal documents.

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Pediatric Aspects

JOHN P. JOHNSON MD

In the past two years, a new population of individuals infected with Human Immunodeficiency Virus (HIV) has been identified. These are children with reported AIDS or AIDS Related Complex (ARC). Nationally, over 300 children with AIDS have been diagnosed; in Maryland, at least five such children have been identified.[1] Seventy-five percent of the children with AIDS are born to a mother who has a risk factor for HIV infection (primarily intravenous drug use), 15 percent have been recipients of blood products, and approximately 8 percent are unidentified.

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The usual age of diagnosis of pediatric AIDS is 5 to 6 months.[2] The most common presentation is Pneumocystis pneumonia. Other manifestations that meet the CDC criteria for diagnosis of AIDS include CNS toxoplasmosis, invasive Candidasis, disseminated viral infections, progressive multifocal leukoencephalopathy, or disseminated mycobacterium avium intracellulae.[3] Two major differences between pediatric and adult AIDS are that Kaposi's sarcoma is uncommon in the pediatric population and bacterial infections occur frequently in the untreated pediatric patients. The pediatric pathogens most commonly encountered are Strep pneumoniae, and Hemophilus influenza, followed by Salmonella, group D entercoccus, and Staphylococci.[4] Mucocutaneous candidiasis and chronic viral infections, particularly CMV and the enteroviruses, are also problems in this population.[5]

A devastating complication of pediatric AIDS is the encephalopathy marked by progressive deterioration occurring in both motor and language milestones.[6,7] At the University of Maryland, CNS involvement has been documented in all of the children with AIDS, three of whom were profoundly effected.

Some newborns with HIV infection have been noted to be dysmorphic.[8] Recognized features include microcephaly, craniofacial abnormalities consisting of prominent boxlike appearance of the forehead, flat nasal ridge, mild upperward or downward obliquity of the eyes, long palpebral fissures with blue sclera, short nose with flattened columnelae, triangular filtrum, and patulous lips. This dysmorphic syndrome is important for two reasons: it may permit the early identification of children infected with HIV and it provides evidence for infection in utero. This dysmorphism differs from fetal alcohol syndrome that includes thinning of the upper vermillion border, maxilliary hypoplasia, shortening of the palpebral fissures, and characteristic palmar creases.

The immunologic abnormalities observed in pediatric AIDS are similar to those in the adult population.[9] Eighty-five percent of the children with AIDS have an absolute deficiency of T4 helper cells, with the resulting reversal of the T4/T8 ratio. The response to both T cell and B cell mitogens is decreased. We have observed a general correlation between the degree of reduction in mitogen response and the severity of the clinical immune deficiency disease. Hypergammaglobulinemia is also common; however, the antibody response to immunizations is markedly deficient.[10]

Variable degrees of immune deficiency secondary to HIV infection occur in the pediatric population. We are following four children with AIDS Related Complex (ARC). These children presented with repeated rather than opportunistic infections, that is, recurrent perirectal abscess, repeated otitis, sinusitis, and meningitis. One of these children was diagnosed at 18 months of age after a year of recurrent infections. The general pediatrician caring for "at risk" children should be aware that there is a population of HIV-infected children who have more mild forms of disease, presenting as recurrent but not severe infection. As in the adult population, there also exists a population of children who are HIV infected but who have not developed clinical disease.[11]

Treatment

The care of pediatric patients with AIDS should be directed at reducing the morbidity associated with the disease. The prognosis for pediatric AIDS is poor; over 60 percent of children diagnosed with AIDS die within 6 months.[12] Therapeutic interventions should be directed to reduce discomfort and time spent in the hospital without unnecessarily prolonging a life with little quality. It is important to engage in frank discussions with the child's parents early after diagnosis to consider the degree of interventions to be applied. On the other hand, success in decreasing the morbidity associated with this disease is based on aggressive treatment of infections and preventive therapy.

A major intervention that appears to decrease the morbidity associated with pediatric AIDS is the use of intravenous gamma globulin. A study reported by Rubinstein *et al.* documented that children treated with IV gamma globulin had decreased incidence of sepsis, fewer episodes of fever lasting greater than one week, lower levels of immune complexes in the serum and decreased LDH (evidence of decreased spontaneous B-cell activity). The treated children developed improved mitogen responsiveness and increased in total

T4 cells.[13] We have found that with the regular use of gamma globulin bacterial infections are an uncommon problem; a greater infectious problem is that of chronic viral infections. The use of gamma globulin in modifying the course of systemic cytomegalovirus infections or chronic enteroviral infections has yet to be established in pediatric AIDS.

The utility of vaccines to prevent certain infections is being evaluated. Preliminary data suggests that patients with AIDS develop a low but protective level of antibody response to pneumococcal vaccine despite their B and T cell deficiencies.[14] Prospective studies of immunization in children with HIV infection will be important in determining the efficacy and safety of specific immunizations.

Tertiary care centers are developing a reasonable degree of experience with managing the acute medical problems of patients with HIV infection. Social support systems have been slower to develop. Areas needing development are systems for the provision of hospice care, crisis intervention systems for newly diagnosed or for dying patients, respite care for overwhelmed families, counseling for families, and programs of education for care providers and public servants. Efforts are under way in the state Department of Human Resources and the Department of Health and Mental Hygiene to provide some of these services.

Screening and Identification

Most of the children with HIV infection are born to women who are either intravenous drug users or sexual partners of drug users.[1] The ability to identify this specific risk factor (that is, maternal infection) has led to the CDC recommendation for the screening of pregnant women at high risk of infection by HIV. These recommendations have been supported by the Governor's Task Force in Maryland with the stipulation that screening be encouraged but not coerced. Obstetric screening programs that offer testing to selected women also must be prepared to provide counseling on risk reduction behavior and on the impact of antibody testing. Knowledge of the maternal antibody status permits the identification of the child at risk and allows follow-up surveillance for possible development of immune deficiency.

The prevalence of infection in children born to HIV positive mothers is unknown; estimates range from 20 to 66 percent.[15,16] Currently, CDC recommends that these children not be immunized with live viral vaccines. The inactivated polio vaccine (IPV) should be given instead of oral polio vaccine (OPV). DPT immunization recommendations are unchanged in this population. The University of Maryland has established a clinic for the follow-up of these "at risk" children.

Current antibody testing in the neonate cannot distinguish between maternal placentally transferred IgG and antibodies produced by the infant. Limited evidence suggests that antibody positivity to HIV beyond six months of age indicates infant infection. It is anticipated that newer technology will provide earlier identification of infants who are infected. Such technologies may include culturing of HIV, identification of nucleic acids sequences of HIV, or more specific antibody detection, that is, fetal IgM synthesis.

Children who are at risk and show signs or symptoms of HIV infection should be referred for immunologic evaluation. Such signs and symptoms of HIV infection may be subtle. Abnormalities to watch for include adenopathy, hepatosplenomegaly, failure to thrive, failure to develop, or mild spasticity. More obvious presentations include recurrent infections, opportunistic infections, and loss of milestones.

There has been a great deal of concern regarding casual child-to-child transmission of HIV infection. Studies of the household contacts of 50 children with AIDS have been reported. Members of these households shared items likely to be soiled with blood or body secretions including toothbrushes, towels, eating utensils, drinking glasses, toilets, toys, food, bed, and bathing facilities. Mean duration of follow-up was approximately 3.2 years. No cases of horizontal transmission could be documented. These results suggest the risk of casual transmission among children is extremely small.[17,18]

The CDC and Governor's Task Force has recommended that children who cannot control their bodily secretions (children who are not toilet trained or who exhibit behavioral problems such as biting) should not be admitted into daycare centers or schools. In this limited situation, the provision of babysitters to the specific home or the establishment of centers for infected toddlers may be a more simple solution to this problem.

Prevention

The problem of AIDS in the adult and pediatric population will be with us for the rest of our lives. The impact upon society is incalculable. The most effective way of reducing the impact of pediatric AIDS upon families and society is prevention. Necessary for prevention will be the establishment of direct and effective educational programs to the populations at risk: drug users, sexual partners of drug users, and bisexual men. More effective programs aimed at prevention and treatment of drug abusers and institution of practices in the drug-using community that prevent the exchange of

blood are needed. It is time for our society and for governmental agencies to realize the urgency of this problem, to support research into the pathogenesis, treatment, and prevention of the infection, and to institute the necessary educational programs.

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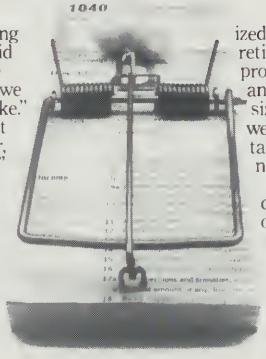
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HIV Antibody Testing

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Originally licensed to screen blood donations, ELISA tests to detect antibody to the virus causing AIDS recently have been recommended in various clinical situations. Because testing for anti-HIV can have profound psychosocial as well as medical implications, adequate counseling of patients, both before testing and when discussing test results, is essential.

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In March 1985, the Food and Drug Administration licensed the first of the enzyme-linked immunosorbent assay (ELISA) tests to detect antibody to the Human Immunodeficiency Virus (HIV, formerly referred to as HTLV-III/LAV) that causes acquired immune deficiency syndrome (AIDS). These ELISA tests were licensed specifically for use in screening blood and blood products for antibodies to HIV prior to transfusion.

As experience has been gained with the ELISA tests and the more technically difficult Western Blot tests, their use for detecting serological evidence of HIV infections has been recommended in other clinical situations.[1-3]

Antibody to HIV

HIV infection stimulates antibody production in the vast majority of persons. Seroconversion usually occurs 4 to 12 weeks after infection with HIV.[4-8] Reports of individuals from whom virus has been isolated and who have failed to develop antibodies have been rare.[9] Unfortunately, the antibodies produced are not neutralizing antibodies and do not lead to viral elimination. In various studies, virus can be isolated in 60 to 90 percent of those with positive tests for antibody.[10-11] All persons with confirmed positive tests for antibodies to HIV must be considered to be carriers capable of transmitting the virus.

Types of Tests

Enzyme-linked immunosorbent assay tests frequently employ automated readers to measure the absorbance of test wells. Simultaneous tests are performed on the test sera and known positive and negative controls. A serum is initially "reactive" when the absorbance measured on its test well is equal to or greater than the cut-off value (mean absorbance of the negative controls plus 0.1 times the positive control mean).

Any serum that is reactive on the initial screening ELISA test is retested. Only sera that are repeatedly "reactive" (as defined above) are reported to have positive tests for antibody to HIV. The test kits of different manufacturers may detect antibodies to differing viral components, and individual sera, in rare instances, may be repeatedly reactive with one manufacturer's kit and negative with another.

Overall, the ELISA tests are very sensitive (range 93 to 98 percent), that is, the tests will correctly identify 93 to 98 percent of the persons who are truly HIV infected. These tests have specificities in the range of 98 to 99 percent, the tests will correctly identify approximately 98 to 99 percent of those who are *not* infected. The predictive value of a positive (repeatedly reactive) test result is closely correlated with the expected prevalence of anti-HIV in the population. In a population group with a relatively high expected prevalence, few positive tests would be false-positive. The likelihood that a positive result on an ELISA test will be confirmed on further testing increases with increasing "degree of reactivity," the larger the ratio of absorbances, the greater the likelihood that confirming tests will be positive. While strongly reactive (ratios of absorbance to cut-off value >7.0) are highly correlated to both positive Western Blot results and positive cultures for HIV,[2] we continue to recommend that *all* repeatedly positive ELISA tests be confirmed by another testing modality such as the Western Blot test for anti-HIV. Given the seriousness of the medical and psychosocial implications of positive tests for anti-HIV, it is extremely important to confirm positive ELISA test results.

Testing with the Western Blot technique is used to confirm positive ELISA tests. Immunoblot testing detects antibody to specific viral proteins and glycoproteins. This test is therefore highly specific. At the Maryland State Laboratory, all sera testing repeatedly reactive on ELISA are automatically tested using the Western Blot. A Western Blot is reported to be positive when antibody to either gp 41, p 24, or both gp 41 and p 24 are detected.

Indications for Testing

The risk groups for HIV infection and symptoms and physical findings suggestive of HIV infection have been detailed elsewhere in this issue.[12] There are a variety of situations in which the physician may consider HIV antibody testing including:

1. **When the patient belongs to a risk group** Patients who belong to recognized risk groups (including the sexual partners of persons in risk groups

and infants born to parents in risk groups) are appropriate candidates for voluntary testing with informed consent.[1] CDC has recommended that women in risk groups who are of child-bearing age or pregnant be encouraged to be tested.[3]

2. **When the patient requests testing** Patients may appear to be needlessly worried about risks of AIDS and, often, a careful history can reveal whether a patient's anxiety is reality based. Many persons are reassured and no longer desire testing when they learn who is at risk of infection and how HIV is transmitted. A patient may request testing because he or she belongs to a risk group and still be unable to admit the risk factor during the medical history. If, after appropriate counseling, a patient who admits no risk factor still wishes to be tested, it may be appropriate to test.

3. **When the patient has symptoms** In patients with clinical signs or symptoms suggestive of HIV infection, antibody testing, with informed consent, may add to the diagnostic process.

4. **When the patient has severe or unusual tuberculosis** Mycobacterial disease, atypical mycobacteriosis or tuberculosis, is common among persons with AIDS. CDC recommends testing for anti-HIV in persons with tuberculosis who have risk factors for AIDS. Additionally, CDC recommends testing be considered for patients with "severe or unusual manifestations of tuberculosis" and for persons with asymptomatic tuberculosis infection over 35 years old.[13,14]

5. **When the patient is a blood or semen donor or likely to become an organ donor or recipient** Procedures and protocols developed by the agency handling the organ procurement should be followed.

Pretest Counseling

The information conveyed in the pretest counseling session will enable the patient to give his or her *informed* consent to be tested. Because of the potential for far-reaching and undesirable effects if test results are positive or if an individual is considered at high risk of AIDS to warrant anti-HIV testing, special emphasis should be placed on pretest counseling. The purpose of the pretest counseling is to inform the patient of the medical, economic, and social implications of HIV antibody testing. Essential elements of this counseling include:

1. **Meaning of a positive test** The presence of anti-HIV indicates infection with the virus and a probable carrier state. In and of itself, a positive antibody test does not mean a person has AIDS; 20 to 35 percent of seropositive persons will be expected to develop AIDS (1 to 5 percent annually),[15–17] others may have nonlife-threatening manifestations, many may remain totally asymptomatic for years.

2. **Risk reduction** Everyone whose "life-style" puts him or her at risk of AIDS should modify behavior to reduce the risk of transmission of HIV infection, regardless of his or her antibody states. Safer sex practices and cessation of parenteral drug use and needle sharing should be discussed thoroughly during this counseling.

3. **Confidentiality of test results** The protection of the confidentiality of test results and risk factor information should be discussed. The patient should be informed as to which staff members will have access to this information and what procedures are employed in releasing these records to third parties. At present, positive tests for HIV antibody are *not* reportable to the Department of Health and Mental Hygiene (DHMH). Only cases meeting the CDC definition for AIDS are reportable to DHMH.

4. **Insurance and other social issues** The patient should be informed that being tested and being seropositive may affect his or her ability to obtain or maintain health and life insurance and may affect his employment, housing and interpersonal relationships.

5. **Options** The Maryland Counseling and Testing Site (CTS) program includes locations where counseling and serological testing are done completely anonymously. Each local health department has information about the CTS program or interested persons can call the **AIDS hotline 945-AIDS (in Baltimore)** or **1-800-638-6252 (elsewhere in Maryland)**. Physicians also can obtain informational material designed to answer patients' questions about HIV antibody testing and about safer sex practices by calling these numbers. Physicians can submit specimens for serological tests for anti-HIV to the Maryland State Laboratory without personal identifiers (for example, using code numbers instead of name and address.)

6. **Testing of women** Women who belong to a risk group and are of childbearing age or pregnant should be encouraged to have testing for antibodies to HIV performed as early as possible.[3]

Interpretation of Test Results

The interpretation of positive serological tests (Table) for anti-HIV is clear when there is concordance of the results of ELISA and Western Blot test results. Since the Western Blot technique detects antibody to specific viral proteins and glycoproteins, the risk of false-positives is markedly decreased. Currently, all ELISA tests (regardless of the degree of reactivity) that are subsequently confirmed by Western Blot testing are considered positive. All seropositive individuals must be considered capable of transmitting the disease.

Where ELISA and Western Blot tests do not agree, the degree of reactivity (strength of the reaction) on the ELISA test may be important in interpreting test results in persons with no identifiable risk factor. Weakly reactive ELISA tests are sometimes seen in multiparous females and are suspected to be due to antibody against HLA-DR4.

In high-risk individuals, antibody levels may be low during the initial phases of seroconversion, and serial testing will demonstrate development of HIV antibodies.

Follow-up of Serological Tests

Seropositive individuals need not be retested unless there is reason to question the test results (unknown laboratory, emphatic denial of risk factors, etc.). Seropositives should be followed medically for signs and symptoms of progressive HIV infection on a regular basis. Counseling and support services frequently are needed.

Individuals with equivocal results (for example E+/WB−) should be evaluated medically, retested to attempt to clarify serological status and followed and counseled on prevention of transmission as if seropositive.

Seronegative individuals who have engaged in high-risk behaviors within the past 12 weeks should be counseled to modify those behaviors and to be retested in approximately 3 months since newly infected persons would be expected to seroconvert in 4 to 12 weeks.

Special cases: **HIV infected women who are not pregnant** should be counseled on the risk of transmission to the fetus and on the potential for pregnancy to have an adverse effect on personal health. It is prudent to defer pregnancy until more is known. **Pregnant women who are seropositive** should be counseled on the possibility of fetal transmission and the effect pregnancy may have on personal health. Those choosing to continue the pregnancy should be monitored closely during pregnancy and after for signs and symptoms of progression of disease. Both the obstetrician and the pediatrician should be aware of the mother's serological status at the time of delivery. **Pregnant women at risk of HIV infection and seronegative when tested early in pregnancy** should be retested during the third trimester. **Infants born to seropositive mothers** should be carefully monitored until the infant's status has been determined. Serological testing of the infant will be an unreliable indicator for at least the first 6 to 12 months of life.[18] These infants **should not** be given live viral vaccines.[19]

Posttest Counseling

Adequate posttest counseling should include the following elements:

- interpretation of the test results
- recommendations on medical follow-up
- referral for psychological support services
- recommendations on prevention of transmission
- recommendations on the follow-up of sexual partners and/or needle contacts

Persons with positive or equivocal results on serological tests for anti-HIV should receive frequent medical evaluations. Often, the need for psychological support services is marked. Seropositive groups and individual counseling are available and referrals may be obtained by contacting the Maryland AIDS hotline.

Seropositives should be carefully counseled on the prevention of transmission. Recommendations include:

1. Do not donate blood, semen, or body organs. If driver's license contains donor designation, have this designation removed. Inform next of kin that organs should *not* be donated.

2. Employ safer sex practices including:

- Reduce number of sexual partners (mutual monog-

Table. Interpretation of Serological Test Results for Anti-HIV

PT Factors	Test Results E+/WB+	E+/WB Not Done	E+ Ratio < 7/WB−	E+ Ratio ≥ 7/WB−
No identifiable risk factors	True positive	Inconclusive; obtain Western Blot	Likely to be false positive; repeat tests to clarify status	Less likely to be false positive; obtain serial tests to clarify status
Risk factors present	True positive	Inconclusive; obtain Western Blot	Unlikely to be false positive; repeat tests to clarify status	Probably true positive; obtain serial testing, follow-up as true positive

E = ELISA test WB = Western Blot + = positive − = negative

amy encouraged for those who continue sexual activity).
- Avoid sexual activities that may cause tissue trauma (receptive anal intercourse is a particularly high-risk activity).
- Use condoms for *all* sexual activity (use liberal amounts of lubricant during vaginal and anal intercourse).
- Avoid the exchange of body fluids between partners.

3. Do not share items of personal hygiene (such as razors or toothbrushes) or sexual aids.

4. Clean spills of blood or body fluids wearing plastic gloves and using disposable cloths. Remove visible soil with soap and water then wash area with a freshly prepared solution of 1 part household bleach (5.25 percent sodium hypochlorite) and 9 parts tap water.

5. Inform dentist and doctors of your serological status.

6. If intravenous drug abuse is a risk factor, enroll in a drug abuse treatment program to stop using drugs. Stop sharing needles and syringes when shooting drugs.

7. Defer pregnancy until more is known. Female sexual partners of male seropositives are at risk of HIV infection and should also be advised to defer pregnancy.

8. Seropositives should be encouraged to refer their sexual partners and needle contacts to private physicians or the CTS program for evaluation and serological testing.

9. Patients should be reassured that HIV infection is not transmitted through casual or nonsexual household or workplace contact.

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Counseling and HIV: Test Results and Risk Reduction

KENNETH B. MORGEN PhD

Pre- and post-test counseling of HIV positive patients has been shown to be helpful. Ideallly, physicians should be prepared to assist the patient in expressing and assimilating a wide range of emotions. They should be able to recognize and deal with the AIDS-phobic patient. Patients should be given the option of having the test performed at an alternate (anonymous) test site. Some perceive infection with HIV as a "time bomb within." Helping the patient understand why and how infection occurs increases their ability to gain control and make meaning of the experience. The problems of the married HIV-positive patient, especially if bisexual, are particularly delicate. Physicians must familiarize themselves with and encourage their patients to practice "safe sex." Notification of sexual partners is a delicate issue that should be discussed in depth with the patient.

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In counseling the HIV-positive patient, the physician must not only be aware of the medical and epidemiological implications of the test findings but also be sensitive to the sociocultural group to which the patient belongs. Counseling patients at risk for AIDS may evoke the physician's own feelings and stereotypes about homosexuality, gays, drug abuse, and addicts. This implies confronting these societal taboos and developing a nonjudgmental posture.[1] Aversion to a particular "life-style" (for example, homophobia) may be a cue for the physician to refer the patient to someone else for counseling. Otherwise, the patient may suspect that good medical care is being compromised.[2] In the case of the homosexual patient, the empathic physician understands that counseling requires the same sensitivity, respect, and unconditional positive regard as for any other human being.[3]

Individuals who belong to high-risk groups usually do not volunteer personal information about their sexual/affectional orientation or drug-use history. Therefore, the physician should include frank, nonjudgmental, open-ended questions in the history taking to determine whether the patient is at risk for exposure to or transmission of HIV. Bisexual patients, especially those who are married, might be particularly loathe to discuss these essential questions with even a most trusted family physician. Those who express their concerns about HIV are usually taking a risk in discussing this information with their physician. It is important for the physician to appreciate this "coming out" as an investment of trust and an invitation to speak openly and without prejudice about the patient's "life-style."

The patient seeking testing will want to know his test results to alleviate concerns about his own health. He also may want to avoid exposing his partner(s) to risk. For example, in one study, a majority of patients who sought testing reported that they would inform their current sexual partners about their antibody status.[4] Knowing the result assists some partners in changing unsafe health practices.[5] Financial, legal, or occupational reasons also can motivate a patient to be tested, for example, concerns about insurance coverage, child custody proceedings, or employment.

Sometimes, however, the patient's concerns may not be reasonable. Those who are particularly worried often have a history of hypochondriasis. This can result in a preoccupation with the fear or belief of having a serious disease, such as AIDS. AIDS-phobic patients can repeatedly present with multiple, vague complaints that can impair social or occupational functioning and can persist despite medical reassurance of negative findings. Such individuals, known as the "worried well," comprise only a subset of otherwise healthy at-risk individuals concerned about AIDS. If patient and firm reassurance with documentary evidence does not suffice to calm the excessively worried but otherwise healthy patient, referral for psychological consultation is in order.

Pretest Counseling

Individuals who have undergone pretest counseling found it either "somewhat" or "very helpful".[4] They appreciated "talking with someone about [their] feelings and concerns" (50 percent) and clarifying or increasing [their] understanding of the meaning of [their] test result" (57 percent). However, before considering taking the test, the patient and physician should determine if the test is necessary. What does the patient believe the test will reveal and how accurate are those beliefs? What would the patient do if he found out the result was positive? If the patient comments "I'll kill myself if I'm positive," testing must be postponed until the fears of a positive result are resolved. This may require a course of professional counseling. Some patients simply may not be able to integrate this news.

At this stage, the patient needs to understand the following:

- the uses of the test
- the meaning of positive and negative test results
- how HIV attacks the immune system
- the concepts and means of AIDS risk reduction
- the accuracy of the test
- the . . . time period for possible seroconversion after exposure

to the AIDS virus
- how stress has been handled in the past
- the voluntary and anonymous [or possibly nonanonymous] nature of the test program.[6]

The patient should also be informed of the possible negative consequences of testing, especially in a nonanonymous setting, for example, denial of insurance or discrimination on the basis of a perceived risk. The patient should understand that release of information contained in the medical record may have damaging consequences. HIV testing should be performed only with informed consent, and the patient should be given the option of having it performed at an alternate (anonymous) test site to avoid any risk of social injury. (See article by Flannery *et al.* on page 77 for more detail on informed consent.)

Antibody Test Result Counseling

In preparing to disclose test results, the physician will be setting the stage for an unpredictable psychological reaction. From the time the blood was drawn until the present, the patient probably will have been quite anxious in anticipating a positive result. For example, in one study, 49 percent of the subjects expected to test positive.[4] It is helpful to start such a session by giving the patient the opportunity to express his feelings.

Disclosure of the test result is best done in a straightforward, unalarming manner with direct eye contact. Applying active listening skills or reflecting not only the content but also the underlying feelings of the patient is always helpful. The goal of the session is to help the patient correctly understand and assimilate the news. Since the shock of a positive result may preclude a meaningful dialogue, a follow-up visit scheduled a few days later will give the patient the opportunity to formulate his questions. However, it should be stressed and may need to be repeated that HIV infection is not synonymous with AIDS. All positive patients and all gay male patients should understand and be encouraged to practice "safe sex."

Psychological Impact of Infection

For most people, being infected with the AIDS virus represents a profoundly troubling life event. Perceived as the "time bomb within," every sleepless night, swollen gland, fever, or rash may be misinterpreted catastrophically as AIDS. The anxiety of testing positive for HIV can be so great that a diagnosis of AIDS could paradoxically come as a relief:

> The most wonderful thing about having AIDS is not worrying about having AIDS. That may be hard to believe, but when you talk to people on the hot line and realize many of them perceive themselves as human time bombs, well, the relief of dying is incredible (Victor Bender, *New York*, August 19, 1985).

This poignant statement illustrates the degree of inner tension many HIV positive individuals may experience.

Patients respond in different ways to the news of HIV infection. Some may be speechless with shock, others may be overcome with grief, fear, or rage. The patient's emotional reaction will guide the counseling physician's course of action in the disclosure session. Confusion between a positive result and a diagnosis of AIDS or ARC is likely. Therefore, reactions are often similar to those of patients who have been diagnosed with AIDS or ARC. Gay men who have been informed of diagnoses of AIDS or ARC have shown a typical human response to life-threatening illness: fears about protracted or more serious illness, fears of burdening or being dependent on others, and fears about the possibility of death.[7]

In addition to the emotional response to this news, individuals tend to develop theories as to why and how they were exposed to the AIDS virus. These theories, or "attributions" are important for the counseling physician to investigate as they may help or hinder the patient in adjusting to seroconversion. Assisting individuals in understanding their infection and in improving their health may help patients gain control and provide a new sense of meaning.[8] Some gay men experience intense guilt and feelings of personal responsibility, even to the extent of feeling they deserve their plight. Such feelings may revive deep-seated attitudes of rejection and self-hatred regarding their sexual orientation. Sensitive medical intervention can help absolve the patient of guilt, shame, or responsibility.

It must be understood that some patients must face an additional threat: the disclosure of their drug addiction or homosexuality to others. This is something that many (especially those who are married) spend their lives trying to keep secret. The calamity experienced by some gay men who face this prospect cannot be overstated.

Counseling to Modify High-Risk Behaviors

Education is probably the single most important factor in lowering the rates of HIV transmission. Seropositive patients must be clearly and nonjudgmentally informed that they should consider their bodily fluids to be infectious. They should be counseled to avoid further exposure to and spread of the virus. Simply reducing the number of sexual partners is **not** an effective means of protection.[9] "Safe sex" guidelines should be encouraged as follows:

- **Safe** most activities that only involve skin to skin contact including mutual masturbation, social kissing, body massage, hugging, frottage [rubbing], light sadomasochistic activities (without

bruising or bleeding), using one's own "sex aids."

- **Possibly safe** anal intercourse with condoms, fellatio interruptus, mouth-to-mouth kissing,[10] urine contact, vaginal intercourse with condom, cunnilingus. Risk may be increased with number of sexual contacts.
- **Unsafe** tissue trauma and/or the exchange of semen or blood (unless the sex partners have been monogamous for five years or more) or including: receptive anal intercourse without condoms, insertive anal intercourse without condoms, manual-anal intercourse [fisting], fellatio, oral-anal contact, vaginal intercourse without condom, sharing "sex aids."[11]

Blood and organ donations should be avoided, needles should not be shared, and the physician should monitor the patient closely if any symptoms suggestive of AIDS appear. Women with AIDS should be apprised of the risks involved in maternal/fetal transmission.

Referral to HIV-positive support groups may be helpful for some individuals. There, in a safe environment, individuals can explore and express their feelings in more depth and discover ways of altering their habits. In the case of the gay HIV-positive patient, referral to gay-affirmative community organizations can help encourage participation in social rather than sexual contexts. For IV drug abusers, drug treatment centers should be considered.

General guidelines of good health including proper nutrition, exercise, rest, and avoidance of drugs and alcohol should be encouraged. Patients need to know that there are positive things they can do to help maximize their health.

Sexual Partner Notification

Notifying sexual partners is a complex issue. In the absence of reporting requirements, it is ultimately the decision of the patient. Revealing results to a person who is not ethically bound by confidentiality risks public branding of the patient as a pariah. If he or she can remain nonjudgmental, the physician can serve as a useful consultant in discussing the ethics of when and to whom one should reveal HIV test results.

The seropositive patient should be encouraged to inform previous sexual partners that he has been tested and to recommend that they get tested. He should also be counseled to tell his prospective partners before engaging in sexual activity that he has been exposed to the HIV virus. Because of the obvious conflicts this engenders, special emphasis should be placed on social and romantic instead of purely sexual interactions. By the time a patient is ready to tell a loved one, trust and mutual respect should be established, thereby minimizing the risk of rejection and gossip.

Many patients may reveal they are in committed homosexual relationships. Gay couples appreciate being afforded the same consideration as their heterosexual counterparts and regard their relationship as no less committed. Counseling ideally includes the spouse-equivalent or lover. If one partner tests negative, the other should consider testing so that proper recommendations can be made. However, if one partner tests positive, both should be advised to follow safe sex guidelines until such time as the controversy over whether repeated exposure to HIV increases one's risk of developing AIDS is resolved.

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The Governor's Task Force on AIDS

EDWARD N. BRANDT, JR., MD, CHAIRMAN

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The Governor's Task Force on AIDS consists of 20 citizens of Maryland including physicians, scientists, public health officials, attorneys, elected officials, nurses, representatives of various state agencies, and laymen. It was appointed by Governor Harry Hughes in December 1985 and has met every other week since then. All meetings have been open to the public and have included testimony from interested parties on virtually all aspects of this disease.

The Task Force is an advisory group without the power to implement or otherwise enforce our recommendations. Our recommendations are made to the Governor, except in those instances where we have been asked specific questions by public or private groups. We leaned heavily on the recommendations of the federal government and other groups dealing with this epidemic.

AIDS is a uniformly fatal and complex illness that is controversial because of its two high-risk groups: homosexual and bisexual men and intravenous drug abusers. Nationwide, there have been 24,430 cases reported with 13,442 deaths as of September 1, 1986; comparable figures for Maryland are 381 cases and 232 deaths.

The charge given by the Governor was to recommend policies for combating AIDS in Maryland. To accomplish this, we operated according to certain principles. The first was to take those steps important to the control of the spread of AIDS. The second was to be responsive to those public and private agencies that had particular concerns or questions about AIDS. We also wished to be responsive to the concerns of those persons infected with the Human Immune Deficiency Virus (HIV) with or without any of the myriad manifestations of such infection. Finally, we held open meetings and deliberations and encouraged any person or group to present their findings, concerns, or thoughts.

The Task Force adopted the philosophy that AIDS and related complexes must be treated differently than are most other illnesses. The social, political, economic, and psychological aspects of this illness are such that confidentiality and privacy are extremely important concepts not to be sacrificed except only under the most unusual circumstances. Clearly, this brings us into contact with some fundamental problems. Specifically, there is apparent conflict between the right of the public to protection from a fatal illness *vs.* the right to privacy of individuals, and there is controversy about standard procedures for health care and public health agencies. Looking across the country, one finds numerous variations on how these issues have been dealt with. We have tended to be supportive of the individual whenever possible.

Since the General Assembly was just going into session, we began our work by considering legislative matters. We believed legislative solutions should be avoided whenever possible, and therefore we chose to introduce one bill and to support one other. The Task Force bill was to close a loophole in the disease reporting legislation of the State of Maryland. According to that law, it was possible for all individual reports held by the Department of Health and Mental Hygiene to be made available to court proceedings and thereby be made public. Our bill (passed by the General Assembly) made such reports available to the courts but only under seal, thereby protecting their confidentiality. We also backed legislation supporting the concept that strict liability should not be assigned to the donation of blood, tissue, or organs.

We opposed legislation that would mandate reporting of all persons testing positive for HIV antibodies: the significance of such tests is not known with certainty and such reporting would produce a list of people but no assurance of confidentiality. We also opposed legislation to limit or ban infected children from schools since they pose no threat to others from such attendance.

These are our recommendations; they have not yet gone to the Governor for implementation.

- We adopted all recommendations of the Centers for Disease Control for control of AIDS and for the protection of health care workers and their patients. In some instances, we added to those recommendations or advised certain limitations.
- We are recommending that no person be discriminated against solely because of HIV infection, AIDS related complex, or AIDS. Such discrimination should not be permitted with respect to employment, school attendance and similar functions, and in the receipt of health care and related services. The major complaints we have had concerning the latter are in the provision of dental care and mortician services.
- One of our recommendations that is considered controversial by some has to do with blood tests. We believe tests for the detection of antibodies to HIV should be administered only under the following conditions:
  1. The testing be voluntary and with informed consent.
  2. A positive test be established only on the basis of Western Blot confirmation.
  3. Testing be administered only if adequately trained counseling is available.

Our recommendations also address procedures for prisons, perinatal clinics, rape victims, and most other situations.

Gonococcal Infections: A Continuing Diagnostic and Therapeutic Challenge

EDWARD W. HOOK III, MD

Gonococcal infections and their sequelae continue to be worldwide public health problems despite steadily improving knowledge of the organism and the epidemiology of gonococcal disease syndromes. In 1985, 910,000 cases of gonorrhea were reported to the Centers for Disease Control, a 4 percent increase over the 1984 figure and the first increase in numbers of reported cases in eight years.[1] Despite impressive numbers however, reported cases represent only about half the true number of cases treated due to underreporting, to nonspecific treatment of patients for urogenital signs and symptoms without culture diagnosis, and to self-treatment by some patients.

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The significance of gonococcal infections should be considered not only in terms of morbidity associated with acute uncomplicated infection (urethritis and cervicitis) but also in terms of complications and sequelae. *Neisseria gonorrhoeae*, along with *Chlamydia trachomatis*, is one of the major causes of pelvic inflammatory disease, the most common complication of gonorrhea in women and a major cause of infertility and ectopic pregnancy (see "Pelvic Inflammatory Disease and Infertility" by J.N. Wasserheit, page 58). This article reviews recent advances in the diagnosis and therapy of gonorrhea with particular emphasis on methods for rapid, accurate diagnosis, the increasing prevalence of infections due to antibiotic resistant *N. gonorrhoeae*, and the rationale behind recent modifications of the Centers of Disease Control's gonorrhea therapy recommendations.

Diagnosis of Gonococcal Infections

Gonococcal infection cannot be diagnosed reliably using clinical signs and symptoms alone. Although the majority of men with uncomplicated gonococcal urethritis will present with "classical" findings of dysuria and purulent urethral discharge, men with gonococcal urethritis may also present with clear mucoid discharge, with dysuria without discharge, or be totally asymptomatic.[2,3] In women, symptoms of gonorrhea, when present, are even less obvious and less specific than for gonococcal infection in men. In women, symptoms of gonococcal infections may resemble findings attributable to other causes of vaginal discharge and/or dysuria (for example, urinary tract infection, trichomoniasis, bacterial vaginosis, or nongonococcal cervicitis).[4,5] Because urogenital signs and symptoms in women tend to be nonspecific and therefore particularly difficult to quantify, asymptomatic gonococcal infections are more common in women than men. In addition, irrespective of sex, gonococcal infections at some sites are frequently asymptomatic; patients of either sex with rectal or pharyngeal infection are more often asymptomatic than not.[6,7] Thus, for proper diagnosis of gonorrhea at any site, clinical presentation is insufficient for diagnosis and further testing usually is required.

The Gram stain is a rapidly available, inexpensive test that when positive, permits initiation of treatment at the time of evaluation rather than delaying 48 to 72 hours while waiting for culture results. A positive Gram stain (gram-negative diplococci within polymorphonuclear leukocytes) of exudate from genitourinary or rectal sites provides a highly accurate means for gonorrhea diagnosis with a specificity exceeding 95 percent.[2] The sensitivity of Gram stain diagnosis varies with site of infection (Table 1).[2,3] In symptomatic men, sensitivity is approximately 95 percent compared with culture.[2] In asymptomatic men with urethral infection, for women with cervical infection, or for symptomatic patients of either sex with rectal infection, the sensitivity of Gram stain is between 40 to 60 percent.[3,8] In males with symptomatic proctitis, sensitivity is increased by using anoscopy to visually direct sampling for Gram stain to areas of purulence or inflammation.[7] In women, the

Table 1: Sensitivity of Gram Strain and Culture for Gonorrhea Diagnosis

Site/Sex	Gram Stain Sensitivity (percent)	Culture Sensitivity (percent)
Urethra/symptomatic males	95	96–100
Urethra/asymptomatic males	~60	96–100
Cervix/females	40–60	96–100
Rectum/symptomatic males	40–60	90–98
Pharynx/males and females	Not recommended	Unknown

diagnostic criteria proposed for mucopurulent cervicitis (increased numbers of polymorphonuclear leukocytes without gram negative intracellular diplococci on Gram stain or the presence of mucopurulent cervical exudate and a positive "swab" test) may further enhance identification of women with gonorrhea, thereby providing the means for earlier initiation of therapy.[9]

Gram stain should never be used to test for pharyngeal gonococcal infection; most adults are colonized with commensal, nonpathogenic Neisseria species, which make the presence of gram negative diplococci in pharyngeal specimens nearly uninterpretable. False-positive Gram stains from anogenital sites are rare and are most often attributable to infection or colonization with *Neisseria meningitis*, which has been described to cause, albeit relatively rarely, nearly all the clinical syndromes more typically associated with gonorrhea. Aside from decreased sensitivity in patients other than symptomatic men, the other major drawback of Gram stain as the sole test for gonococcal diagnosis is that organisms identified by Gram stain cannot be tested for the presence of beta-lactamase production, plasmid mediated tetracycline resistance, or for chromosomally mediated resistance to antimicrobial agents. Despite these shortcomings when used alone, when used in combination with culture confirmation on selective media the Gram stain is an important part of optimal evaluation of symptomatic patients for gonorrhea.

Since the early 1960s, the introduction and subsequent refinement of selective media such as Thayer-Martin, modified Thayer-Martin, Martin-Lewis, or New York City media improved the diagnostic yield and ease of culture diagnosis for gonorrhea, particularly from biologically complex sites such as the cervix, rectum, and throat.[8,10] Each of these media incorporates a combination of antimicrobial agents such as nystatin, vancomycin, trimethoprim, polymixin, or amphotericin B to inhibit other bacteria and fungi often present at mucosal sites while permitting selective growth of pathogenic Neisseria. Following isolation of oxidase positive, gram negative diplococci, differentiation of *N. gonorrhoeae* from organisms such as *N. meningiditis*, *N. cinerea*, or *Branhamella catarrhalis* and testing for beta-lactamase production can be carried out using simple biochemical tests. Overall, the sensitivity of culture diagnosis for uncomplicated gonorrhea ranges from 96 to 98 percent.[10] A small percentage of gonococci will not grow on selective media due to inhibition by antimicrobials (most often vancomycin or trimethoprim) in the media.[8,10] Nonetheless, the numbers of isolates lost due to inhibition by selective media (false negative cultures) are, in general, less than the numbers of isolates that would not be identified using nonselective media because or problems such as bacterial overgrowth. A further advantage of culture diagnosis for gonorrhea is that it provides viable organisms which can then be tested for beta-lactamase production, plasmid mediated tetracycline resistance, or chromosomally mediated antimicrobial resistance. Identification of resistant isolates is particularly important for epidemiologic purposes and for evaluation of possible treatment failures.

In recent years nonculture diagnostic methods for identifying gonococcal infections have become increasingly available. In general, nonculture diagnostic tests approximate or only modestly exceed the accuracy of Gram stain for gonorrhea diagnosis.[8] They tend to be most accurate for men with symptomatic urethritis and less accurate for diagnosis of asymptomatic urethritis in men or cervical infection in women. Currently, no nonculture diagnostic test is recommended for diagnosis of rectal or pharyngeal infection.[8] Among such methods, enzyme immunoassay methods for gonococcal antigen detection are the most widely used.[8,11] Nonculture methods for gonorrhea diagnosis also tend to be most accurate in situations where the prevalence of gonococcal infections are high; these methods are generally unsuitable in situations where the prevalence of infection is low (less than 2 to 4 percent) due to an unacceptably high rate of false-positive tests that may incorrectly suggest a diagnosis of gonorrhea. In addition, none of the available tests are sufficiently rapid to permit diagnosis while the patient waits, and thus they do not offer meaningful reduction in the time required for etiologic diagnosis. At present, nonculture diagnostic methods for gonococcal infection can be recommended only for those areas in which culture diagnosis is unavailable due to the lack of microbiologic support or where long transportation times for transport to a microbiology lab may result in spuriously low culture positivity rates.

Antimicrobial Resistance of *N. gonorrhoeae*

In the mid-1930s with the introduction and widespread availability of sulfonamides, most patients with acute gonococcal infection could, for the first time, be reliably treated.[12]

By 1944, due to increasing resistance of gonococci to sulfonamides, over 35 percent of treated patients failed therapy.[13] The utility of sulfonamides for gonorrhea therapy had become limited due to two interacting constraints: the development of sulfonamide resistance by the gonococcus and the relatively narrow therapeutic-toxicity ratio of the early sulfonamides. To have further increased sulfonamide dosage for gonorrhea would have resulted in unacceptable (primarily renal)

toxicity. Fortunately, however, in 1943 Mahoney, *et al.* first reported penicillin to be effective for gonorrhea therapy, using approximately 160,000 units of penicillin in divided doses.[13] Since the 1940s, the gonococcus has evolved progressively increasing resistance to penicillin, necessitating stepwise increases in the dose required to reliably treat the disease. In 1972 the CDC increased the recommended dose for therapy of uncomplicated gonorrhea to 4.8 million units of aqueous procaine penicillin G (30 times the 1943 dose), again due to increasing resistance and, therefore, failure rates. At that time, administration of probenecid, 2 grams by mouth, at the time of penicillin treatment also was recommended to prolong the penicillin half-life, thereby further increasing the efficacy of penicillin therapy. In the 30 years since it became available, progressively increasing doses of penicillin for reliable gonorrhea therapy had become necessary resulting from the stepwise accumulation of resistance due to multiple, independently operating chromosomal mutations.[14]

Subsequently, in 1976 the next threat to the efficacy of penicillin for treating gonorrhea was recognized simultaneously in Africa and Southeast Asia where, for the first time, gonococci producing beta-lactamase (PPNG), and therefore impervious to the effects of penicillin, were recognized. *N. gonorrhoeae* is thought to have independently acquired plasmids for beta-lactamase production in both Southeast Asia and Africa.[15,16] In each area, widespread use of nonprescription, over-the-counter antimicrobial agents may have permitted selection for antimicrobial resistance. Since 1976, PPNG rapidly disseminated throughout much of the world.[16,17] At present, high frequencies of PPNG have resulted in unacceptable cure rates for penicillin treated patients in Southeast Asia, Africa, and several other parts of the world. In the United States, between 1976 and 1979, PPNG infections were relatively rare, most often being linked to individuals who had become infected in parts of the world where PPNG was more common.[16,17]

In 1979, however, it appears that PPNG entered the general population of the United States, and since then the numbers of cases have steadily increased.[8] PPNG have been isolated throughout the entire United States and have been associated with all clinical syndromes caused by *N. gonorrhoeae*. In 1984, over 4,000 cases of gonococcal infections caused by penicillinase producing *N. gonorrhoeae* were reported to the Centers for Disease Control; in 1985 this number more than doubled to exceed 9,000 cases.[18] In considering these numbers it is also important to realize that during the same period, in excess of 900,000 cases of gonorrhea were reported to the Centers for Disease Control. Thus although PPNG infections continue to increase at an alarming rate, they presently represent slightly less than 1 percent of the total gonorrhea reported in this country. The distribution of penicillinase-producing strains of *N. gonorrhoeae* is inhomogenous within the United States. Although most areas have not experienced dramatic increases, in several areas the PPNG rate has risen to the point where penicillin can no longer be relied on for effective gonorrhea therapy. In Dade County, Florida, nearly 40 percent of gonorrhea currently is caused by beta-lactamase producing *N. gonorrhoeae*.[18] Until now the spread of PPNG has been curtailed by aggressive intervention by U.S. public health officials, a process that almost certainly has slowed down the spread of these organisms within most of the country.

In 1984 a sustained outbreak of penicillin-resistant, non-beta lactamase producing *N. gonorrhoeae* was identified in Durham, North Carolina,[19] and resulted in increased appreciation and recognition of chromosomally mediated resistant *N. gonorrhoeae* infections in this country.[20] In many ways, chromosomally mediated resistance may pose a greater public health threat than PPNG (Table 2). Whereas PPNG are resistant to only beta-lactam antibiotics, chromosomally mediated resistance is the consequence of a variety of independently determined mechanisms often acting synergistically to cause increased antimicrobial resistance.[14] Thus organisms with chromosomally mediated resistance to penicillin may be resistant as well to tetracycline hydrochloride, erythromycin, and in some cases, even spectinomycin.[14] To further complicate matters, chromosomally mediated resistance is more difficult to detect than beta-lactamase production, which may be detected using an easy, rapid method for detection of microbial beta-lactamase. It now appears that chromosomally mediated resistance of *N. gonorrhoeae* to antimicrobial agents has not been a sudden occurrence but is the result of a stepwise, gradually progressive process that only has recently reached the point beyond which further increments in penicillin doses can no longer be safely made. Similarly, the continued emergence of chromosomally mediated resistance to tetracycline and the recent recognition of plasmid mediated, high-level tetracycline resistance have now made the use of tetracycline as sole therapy for gonorrhea unacceptable (failure rates may exceed 10 percent). As a result, tetracyclines can no longer be recommended as sole therapy for gonorrhea.

Thus the continuing emergence and development of new forms and higher levels of antimicrobial resistance by *N. gonorrhoeae* have necessitated further revision in antimicrobial treatment recommendations for gonorrhea and may soon lead to the end of the penicillin era of gonorrhea therapy.

Table 2: Comparison of Antimicrobial Resistance Mechanisms of *Neisseria gonorrhoeae*

	β-lactamase producing *N. gonorrhoeae*	*N. gonorrhoeae* with chromosomal *antimicrobial resistance*
Mechanism	Single step acquisition β-lactamase plasmid	Cumulative effect of multiple chromosomal mutations
Mediates resistance to	Chiefly β-lactam antibiotics	β-lactams, tetracyclines, erythromycin, spectinomycin (rare)
Detection	Rapid, single step screening procedures	Difficult and time consuming to detect
Frequency	Geographic variation-overall ~1% of US isolates	Geographic variation—national frequency unknown

Current Therapy for Gonococcal Infections

In general, therapy of gonorrhea must be individualized not only because of regional differences in an antimicrobial susceptibility of *N. gonorrhoeae* but also because of differences in patient needs, differences in potential sites of infection, and differences in the resources for funding treatment. In the 1980s cost-effective therapy for gonorrhea requires more than single-dose administration of antimicrobial agents effective against the organism. Optimal therapy should be effective for treatment of infections caused by potentially antibiotic resistant *N. gonorrhoeae*, should be effective at all potential mucosal sites of infection (for example, spectinomycin is ineffective for pharyngeal gonorrhea, ampicillin plus probenecid is unacceptable for rectal gonorrhea), and should be effective for possible co-infecting pathogens. With the exception of spectinomycin, most currently recommended mechanisms for gonorrhea therapy are probably effective for co-existent incubating syphilis. Unfortunately, the same is not the case for *C. trachomatis* which occurs as a co-infection in approximately 20 percent of men and approximately 40 to 50 percent of women with uncomplicated gonorrhea. At this time no single-dose therapy is reliably effective for treatment of Chlamydia[21]; multidose therapy with the penicillins, cephalosporins, and spectinomycin are all also unacceptable for chlamydia therapy.

Other attributes desirable for an optimal therapeutic agent for gonorrhea would be

- effective as a single dose therapy obviating potential compliance problems
- safe and convenient to take
- relatively inexpensive to administer (since much of the treatment of gonorrhea is carried out by public agencies whose financial resources are increasingly limited).

In September 1985, the Centers for Disease Control released newly revised treatment recommendations[21] for gonococcal infections (Table 3). In most of the United States, the gonococcus has continued to be sensitive to currently recommended doses of penicillin despite increasing chromosomally mediated resistance. As a result, recommended therapy is ampicillin 3.5 (or amoxicillin 3.0) grams given orally as a single dose in combination with 1 gram of probenecid. This regimen is relatively well tolerated, cost effective, and reliable; unfortunately it is also significantly less effective for pharyngeal gonorrhea or gonococcal infections occurring in homosexual men than is intramuscular administration of 4.8 million units of aqueous procaine penicillin G, again in combination with 1 gram of P.O. probenecid. Due to the considerable pain and discomfort associated with administration of 4.8 million units of intramuscular penicillin, as well as the frequency of adverse effects such as procaine reactions and the potential for treatment failures due to PPNG or chromo-

Table 3: Current Recommendations for Treatment of Uncomplicated Gonorrhea

Ampicillin 3.5 g (or Amoxicillin 3.0 g) P.O. plus probenecid, 1.0 g P.O. plus tetracycline* 500 mg P.O. q.i.d. × 7 d

or

Ceftriaxone, 125–250 mg IM plus tetracycline* 500 mg P.O. q.i.d. × 7 d

or

Aqueous procaine penicillin G, 4.8 million units IM plus probenecid, 1.0 g P.O. plus tetracycline* 500 mg P.O. q.i.d. × 7 d

or

(for penicillin-allergic patients)

Spectinomycin 2.0 g IM plus tetracycline 500 mg P.O. q.i.d. × 7 d

* doxycycline 100 mg P.O. BID or, for patients unable to take tetracyclines, erythromycin 500 mg P.O. q.i.d. may be substituted for tetracycline.

somally mediated resistant *N. gonorrhoeae*, other drugs also are increasingly being used for therapy of gonorrhea.

The most recent CDC treatment guidelines have, for the first time, recommended use of a cephalosporin antibiotic, ceftriaxone, as first-line therapy for uncomplicated gonorrhea. Ceftriaxone is unusually well suited for gonorrhea therapy because of its long (greater than 7 hours) serum half-life, because it is effective for uncomplicated gonorrhea caused by both PPNG and chromosomally mediated resistant *N. gonorrhoeae*, because it is effective at all sites of infection, and because, as a result of its relatively small volume and ease of administration, it is better tolerated by patients than is aqueous procaine penicillin G. The optimal dose of ceftriaxone is somewhat controversial. The current recommendation by the Centers for Disease Control is for treatment using 250 mg intramuscularly.[21] However, many experts believe that a 125 mg dose is equally effective, and this dose is being used in several major public health clinics across the country (Handsfield, H.H.; Judson, F.N.; and Hook, E.W., III, personal communications). In one small study carried out in Southeast Asia, 31.25 mg (0.12 cc) of ceftriaxone cured 53 of 54 (98 percent) patients including 17 patients infected with PPNG.[22]

The final drug currently recommended for therapy of gonorrhea is spectinomycin hydrochloride,[21] an antibiotic that continues to be particularly useful for patients with penicillin allergy, having the advantage of being unrelated to the beta-lactam antibiotics. Spectinomycin is effective for anogenital gonorrhea and infection caused by antimicrobial-resistant, as well as sensitive gonococci, but is ineffective for patients with gonococcal pharyngitis. There have now been several reports of spectinomycin resistant strains of *N. gonorrhoeae*, however, the frequency of this form of resistance is sufficiently low that spectinomycin or ceftriaxone are currently co-equal therapies of choice for patients infected with potentially antimicrobial resistant *N. gonorrhoeae*.

Each of these single-dose therapies should be administered with 7 days of tetracycline, 500 mg, P.O. four times daily (or doxycycline 100 mg, P.O. b.i.d.). For patients unable to tolerate tetracycline or for pregnant women, erythromycin 500 mg P.O. four times daily for 7 days may be substituted. This co-therapy is not intended as therapy for gonorrhea, but is recommended due to the relatively high probability of chlamydial co-infection in patients with gonorrhea. As mentioned above, neither tetracycline or erythromycin alone can be relied upon to cure gonococcal infections and should not be used for this purpose.

In all probability, the gonococcus will continue to develop progressive antimicrobial resistance to the agents used for gonorrhea treatment. The continued development of resistance and continued testing of antimicrobial agents for gonorrhea therapy is an important part of efforts to control gonococcal infections. For the future, quinolone antibiotics (DNA gyrase inhibitors related to naladixic acid) show particular promise for the therapy of gonorrhea.[23] These orally administered antibiotics are highly effective for antibiotic-sensitive and resistant strains of *N. gonorrhoeae* and are unrelated to beta-lactam antibiotics. Some quinolones have the further advantage of being effective *in vitro* for *C. trachomatis* and thus may allow an eventual return to single-drug therapy for both gonorrhea and chlamydia co-infections. Among the quinolones generating most interest to date are ciprofloxacin, ofloxocin, and norfloxacin. However, none of these antimicrobials are currently available for consumption in the United States.

Update

Most recently a third mechanism for antimicrobial resistance has been noted in *N. gonorrhoeae*. In September 1985, gonococci with unusually high levels of tetracycline (but not penicillin) resistance were discovered in several states including Maryland (approximately 15 percent of gonococci in the city of Baltimore display this form of resistance) (Hook, E.W. III and Reichart, C. unpublished data). This form of resistance, like β-lactamase production, is plasma mediated; however, it is due to insertion of a streptococcal resistance gene (te+M) into a preexisting gonococcal conjugative plasmid and represents a heretofore undescribed additional mechanism for bacterial antimicrobial resistance.[24]

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Chlamydial Infections

JUDITH C. LOVCHIK PhD

Infections with *Chlamydia trachomatis* are receiving increasing attention for their role in multisystem illnesses of women, men, and children. The prevalence of chlamydia infections is greater than that of other sexually transmitted diseases and is increasing dramatically. Use of available diagnostic methods and treatment can prevent or shorten these illnesses. The serious complications and sequelae of untreated chlamydia infections, coupled with a high prevalence of infection, warrant screening of high-risk groups. To break the cycle of transmission, treatment of sexual contacts and parents of infected infants is important.

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C. trachomatis, long sheltered from therapeutic assault by a cloak of obscurity, is finally gaining the sinister reputation it deserves among clinicians and the vulnerable lay public. Although it has been one of the most common and injurious sexually transmitted diseases, until recently it has been virtually unknown outside of scientific circles. Within the past year or two, however, almost every lay journal with a predominantly young female readership has published an informative article on chlamydia, the "new" sexually transmitted disease. Given the complications and sequelae of untreated chlamydial infections coupled with a high prevalence of infection, the recent notoriety surrounding chlamydia can be expected to benefit a significant segment of the population by exposing a greater number of infections to diagnosis and treatment.

The recent unmasking of chlamydia as a major pathogen can be credited to two key scientific events. The first and most important was the development of techniques for isolating the organism. Only since 1965 has isolation in cell culture been successful. Previous techniques were technically more cumbersome and relatively insensitive. The second was the realization that besides genital infection and conjunctivitis, chlamydia was responsible for a large percentage of pneumonias in infants. Following this revelation in 1975,[1] increased attention to this sexually transmitted pathogen began to disclose the magnitude of the chlamydial problem.

Chlamydia is probably the most common sexually transmitted pathogen in this country. Thirty-seven percent of teenagers screened at the University of Maryland Adolescent Clinic in the first eight months of 1986 were found to be infected with chlamydia at one or more visits. By comparison, only 11 percent of this group had gonorrhea (personal communication, Myshelle Farmer MD). When patients from this clinic were screened in 1980–1981, 26 percent were infected with chlamydia and 9 percent had gonorrhea.[2] These figures show that chlamydial infections among teenagers may be increasing sharply.

Prevalence of genital chlamydial infection in sexually active patients is inversely correlated with age. Except for transient asymptomatic vaginal and rectal colonization in some neonates, genital infections in prepubertal children strongly suggest sexual abuse.

Diseases caused by chlamydia affect several organ systems and contribute significantly to morbidity and health care costs. These infections sometimes require hospitalization, for example, infant pneumonia, salpingitis, and perihepatitis. Some are chronic and require repeated clinic visits, such as urethritis, acute urethral syndrome, and cervicitis. Some lead to more serious problems such as prematurity, infertility, myocarditis, endocarditis, and meningoencephalitis. Others cause less serious morbidity, such as conjunctivitis, otitis media, and respiratory infections. Early detection and appropriate treatment could prevent or lessen these illnesses.

Clinical Manifestations

Babies born to infected mothers are at higher risk of acquiring the infection at birth. Conjunctivitis beginning in approximately the second week of life is one manifestation of this infection in infants; 46 percent of infants with conjunctivitis in a recent Baltimore study were infected with chlamydia.[3] Pneumonia within the second or third month of life is another relatively common manifestation. It has been estimated that between 30 and 70 percent of pneumonias in this age group are associated with *C. trachomatis* infection.[4] Since these are sometimes subclinical, chlamydial pneumonitis in infants is no doubt underdiagnosed.[5] Atypical croup in older children also has been attributed to chlamydia.[6] Middle ear abnormalities were found in more than half of culture-positive infants.[4]

Chlamydial infections in women contribute significantly to health care costs. These infections most commonly cause cervicitis, salpingitis, endometritis, and urethritis. Between one-third and two-thirds of salpingitis cases can be attributed to chlamydia. Chlamydial infection frequently extends beyond the cervix into the endometrium even in apparently uncomplicated cases of cervicitis. Infertility resulting from postinfection tubal occlusion has been increasing in recent years.[7]

A report from Seattle attributed a ten-fold risk of perinatal mortality to chlamydial infections in pregnant women.[8] A recent Baltimore study found chlamydia-

infected pregnant women three times more likely to suffer premature rupture of membranes than their noninfected counterparts.[9] Chlamydial infection has been more rarely associated with postmenopausal vulvovaginitis and bartholinitis. Pap smears are more apt to be abnormal in chlamydia-infected women.[10]

In males, *C. trachomatis* infections were found to be responsible for one-third to one-half of nongonococcal urethritis.[11] Another consequence of this infection is epididymitis, particularly in younger men.[12]

Inclusion conjunctivitis and/or proctitis also may occur in sexually active adults. Endocarditis, myocarditis, and meningoencephalitis are less common manifestations of chlamydial disease.

Infections with *C. trachomatis* are frequently asymptomatic. In a Baltimore study, 14 percent of asymptomatic females attending family planning clinics were found to be infected with chlamydia.[2] Similarly, a New Orleans study of asymptomatic men found 13 percent to be infected with chlamydia.[13] Infected babies are also frequently asymptomatic.

Sequelae and Long-term Effects

Conjunctivitis Untreated chlamydial infection may persist in the conjunctiva, sometimes for years. Except in countries where trachoma is endemic, long-term impairment of functional vision has not been shown, although minor abnormalities of the cornea and conjunctiva are common sequelae of untreated chlamydial conjunctivitis.[14] As might be expected, follow-up studies of neonatal conjunctivitis show affected infants to be at higher risk for developing chlamydial pneumonia, particularly if the conjunctivitis is not appropriately treated.

Pneumonia Children exhibit impaired pulmonary function tests as long as eight years following an episode of chlamydial pneumonia. They are also more prone to asthma.[15]

Cervicitis Many cervical chlamydial infections are accompanied by upper genital tract infection. When the fallopian tubes are involved, tubal occlusion frequently occurs, especially after more than one inflammatory episode. Chlamydial salpingitis tends to be clinically silent more often than salpingitis caused by gonorrhea or other pathogens, but the potential for tubal damage is at least as great. Ectopic pregnancy and/or infertility occur significantly more often in women who have been infected with chlamydia.[7]

Urethritis About 5 percent of untreated males with chlamydial infection will develop epididymitis. Some cases of Reiter's Syndrome are also attributed to chlamydial infection; and as many as 50 to 70 percent of these patients are infected with the pathogen.[7] An Ontario study found 56 percent of chronic prostatitis patients to be infected with chlamydia.[16]

Diagnostic Tests

Studies have shown that empirical treatment based on clinical suspicion alone has resulted in serious undertreatment of chlamydial infections. Presumptive diagnosis without laboratory confirmation also leaves the clinician unable to verify microbiological cure. Amelioration of symptoms in partially treated patients may not be sufficient to prevent sequelae and transmission to others. However, lack of laboratory diagnostic facilities for chlamydia has left many clinicians without the possibility for definitive testing. More major laboratories have begun to offer this service recently, but many geographic areas are still without this diagnostic tool.

Nonculture tests for chlamydia have been developed and made available within the past few years. These are based on monoclonal antibodies that are used to identify the microorganism in clinical specimens and include detection with fluorescence microscopy as well as ELISA technology. These tests recently were compared with isolated by culture using triplicate specimens taken from more than 400 patients at University of Maryland Hospital outpatient clinics. The fluorescent antibody test was 80.5 percent to 90.3 percent sensitive (depending on cutoff value) and 99.7 percent specific while the enzyme assay was 89.4 percent sensitive and 98.6 percent specific.[17]

While culture usually outperforms nonculture tests for chlamydia, on specimens from remote areas the nonculture tests may give better results than culture due to specimen transportation difficulties. In our experience, the fluorescent antibody assay requires considerable interpretive skill, best acquired through feedback derived from culture results and maintained by constant practice on a reasonably high test volume. In small or remote laboratories, these conditions are not always met, compromising test reliability. On the other hand, it is the only chlamydia diagnostic test that reveals specimen adequacy. Since inadequate specimen collection is a major cause of false-negatives in all types of chlamydia diagnostic tests, the fluorescent antibody test can be effective in teaching clinicians the exacting sampling techniques required for chlamydia detection. For large-volume screening, the enzyme assay is preferable to the fluorescent assay because it is technically less demanding to perform. Subjective interpretation is eliminated in the enzyme assay, allowing the test to be performed by relatively unskilled technical personnel.

Lower cost and turnaround time have been used to promote nonculture tests for chlamydia. In reality, studies have shown the fluorescent test to cost only

about $4 less per test to perform than does culture.[18] The enzyme test is comparable to the fluorescent antibody test in performance cost. Both nonculture tests allow results to be returned to the clinician one day sooner than culture. The promise of 30-minute performance of the fluorescent antibody test ignores the realities of transportation time to the laboratory and batching of specimens. Unless the test was performed and reported while the patient was in the office, the time savings rarely would have significant therapeutic impact. Unfortunately, few physician offices have the test volume needed to warrant the employment of a technician skilled in interpretation of the test. Even those probably would require batching of specimens for economy.

The pap smear, available to virtually all female patients in the United States, has been reported to be effective in diagnosing genital chlamydial infections and is relied on by many physicians and their patients today. Unfortunately, in a comparison of pap smear detection with culture done on 100 women at the University of Maryland Obstetrics and Gynecology Clinic, there was no overlap between the group of eight culture-positive patients and the group of eight patients whose pap smear reports suggested chlamydial infection. Similar disappointing comparisons have been made elsewhere.

Treatment

For uncomplicated genital infections with chlamydia in adults, tetracycline is the recommended antibiotic. Oral doxycycline (100 mg every 12 hours) or tetracycline (250–500 mg four times daily) for 10 to 14 days are recommended. Erythromycin should be substituted in children as well as lactating and pregnant women. Inclusion conjunctivitis in infants is treated with oral erythromycin (50 mg/kg per day) in four divided doses for 14 days. It is important to test for cure several weeks following completion of therapy even if symptoms have subsided. In infants, 12 to 33 percent treatment failure after systemic therapy has been reported. Nasopharyngeal cultures are preferable for test of cure in infant conjunctivitis.

Because infections with chlamydia are more common in infants than infections with gonorrhea, some hospitals have replaced ocular silver nitrate prophylaxis with erythromycin ointment because the latter has efficacy against both pathogens. While topical antibiotics also have been used to treat neonatal conjunctivitis, these cannot effectively replace systemic therapy in the treatment of chlamydia, particularly since they do not prevent respiratory disease.

Sexual Partners

As with other sexually transmitted diseases, control depends largely on identification and treatment of partners and parents of index cases. These should be **treated** whether they test positive for chlamydia, since all diagnostic tests are limited in sensitivity. For this reason, it makes little sense to **test** partners/parents for chlamydial infection until after they have completed their course of treatment to insure that the infection has been eradicated. Reinfections and treatment failures are common.

Screening

Because chlamydial infections are often asymptomatic, it is unlikely that the current epidemic will be controlled without screening programs targeted at high-risk populations. Past studies have found the highest prevalence of chlamydial infections to occur in sexually transmitted disease (STD) clinic patients as well as sexually active young people, particularly the urban lower socioeconomic class. Although chlamydia is three times more prevalent than gonorrhea in most populations, few STD clinics routinely screen patients for chlamydia. While screening programs for teenagers and pregnant women have been instituted in a few geographic centers near research institutions, they are rare elsewhere.

With increased availability of diagnostic testing for chlamydia, failure to institute screening programs probably is due partly to inertia and partly to shrinking funds for public health programs. Policy makers must balance cost of testing against human costs and financial costs due to sequelae of infection. Chlamydia testing has been considered expensive by health-care professionals and those who fund health-care programs. Documentation of the threat to health and fertility presented by chlamydial infections has made the cost of diagnostic testing seem more of a bargain in recent years.

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Pelvic Inflammatory Disease and Infertility

JUDITH N. WASSERHEIT MD

Although the advent of antibiotics has decreased the acute and chronic morbidity of pelvic inflammatory disease (PID), today in the United States one of five women who have had this preventable disease become infertile and half of ectopic pregnancies occur in this group. Young, sexually active, nulliparous women at the beginning of their reproductive lives are at high risk for this infection. PID may be caused by over 20 different organisms resulting in a broad spectrum of clinical presentations. In addition, because the uterus and fallopian tubes are difficult to assess clinically and microbiologically, precise anatomic and bacteriologic diagnosis often is difficult. This means clinicians must maintain a high index of suspicion in evaluating women with symptoms of lower abdominal pain, abnormal vaginal discharge, abnormal vaginal bleeding, dysuria, or even isolated right upper quadrant pain. Treatment must include evaluation and treatment of male partners as well as two antibiotics for 10 to 14 days.

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Pelvic inflammatory disease is, with the exception of acquired immunodeficiency syndrome (AIDS), simultaneously the most morbid and the most difficult to diagnose of all of the sexually transmitted diseases affecting women. PID refers to infection at any site or combination of sites in the upper genital tract of the female: endometritis, salpingitis, oophoritis, parametritis, and pelvic peritonitis. It is a term born in an era in which clinical assessment of the female genital tract above the cervix was not supplemented by uterine sampling or by laparoscopy. Identification of the anatomic extent of infection (with its prognostic implications) was, therefore, usually impossible, and PID became a clinically useful, all-encompassing syndromic diagnosis describing the combination of lower abdominal pain and tenderness on bimanual examination of the uterus and adnexa.

The importance of PID lies both in the fact that it is a common disease preferentially affecting young women at the beginning of their reproductive lives and in the fact that it often results in severe long-term sequelae such as infertility, ectopic pregnancy, chronic pelvic pain, and recurrent infection. PID is, therefore, one of the primary reasons for nationwide intensive efforts to locate and treat sexual contacts of men and women with urethritis or cervicitis.

Although these lower genital tract infections are themselves usually associated with only transient and minor discomfort, untreated they may lead to physiologically and emotionally devastating upper tract disease in women. Control of PID lies in understanding who is at high risk, what diagnostic clues can be found in the lower genital tract, and why therapy must include contact tracing as well as dual antibiotics for at least ten days.

Epidemiology

PID is a frequent and costly disease. It is estimated that in the United States, 10 to 15 percent of women of reproductive age have had at least one episode of PID and that annually between 500,000 and 1,000,000 new cases are added to this figure.[1] At least one quarter of women in the post-PID state bear stigmata such as infertility, ectopic pregnancy, or chronic pelvic pain.[1] Seven years ago, the Centers for Disease Control (CDC) estimated that the annual comprehensive cost of this disease and its sequelae was more than $2.7 billion.[2]

Pelvic infection disproportionately targets nulliparous adolescents. In Sweden, one third of women with tubal infection have their first episode of disease before the age of 20 and three quarters have never had a child.[1] Although analogous figures have not been published for Maryland, during the first six months of 1986, 73 percent of the gonococcal PID reported to the Baltimore City Health Department occurred in women less than 25 years old (H. Stern, C. Campbell, and D. Glasser, unpublished data). In the United States as a whole, sexually active 10 to 15 year olds have a 7- to 10-fold greater risk of developing PID than do sexually active 20 to 24 year olds (H.H. Handsfield, unpublished data).

Factors responsible for this high increased relative risk among the group most vulnerable to loss of reproductive potential include both physiologic and behavioral characteristics. Some of these are: (1) lower prevalence of protective antibody titers; (2) larger zones of cervical ectopy that may facilitate initial attachment of pathogens; (3) greater penetrability of the cervical mucus plug that may facilitate ascent of pathogens (2 and 3 are the result of perimenarchal hormonal influences); (4) greater numbers of partners; and (5) selection from a partner pool with a high prevalence of sexually transmitted diseases.

Contraceptive method also influences a woman's risk of PID. Intrauterine device (IUD) users are roughly four times as likely to develop upper tract infection as are women who use no method.[3] Among nulliparous IUD users this risk may be doubled. IUDs may predispose to PID by at least three mechanisms: (1) they may alter the cervicovaginal milieu to allow overgrowth of

anaerobes; (2) their tails may facilitate ascent of cervicovaginal flora by providing a conduit into the endometrium; and (3) as foreign bodies they may impair host defenses against pathogens that do reach the upper tract. In contrast to IUDs, oral contraceptive pills and barrier methods are slightly protective against PID[3] and should, therefore, be recommended over IUDs to contracepting women, particularly if they are young, nulliparous, or sexually active with more than one partner. Women who do develop tubal infection while on the pill may, because of reduced scarring, also have a better fertility prognosis than noncontraceptors or users of other methods.[4]

Other factors to be considered in evaluating a patient's risk of pelvic infection (Table 1) include sexual activity, phase of the menstrual cycle, prior episodes of PID, and race and socioeconomic status. Since the majority of PID is caused by sexually transmitted pathogens rather than by endogenous vaginal organisms, its incidence increases with increasing numbers of partners, particularly with exposure to multiple new or "casual" partners. The onset of symptoms in gonococcal PID occurs within seven days of menses in half to two-thirds of patients.[3] Perimenstrual increases in penetrability of cervical mucus, reflux of infected material into the fallopian tubes during uterine contractions, and augmented nutrient supply for gonococcal growth in the presence of menstrual blood may all play a role in this phenomenon.

Almost one quarter of women with PID develop recurrent infection and over half of these recurrent episodes occur within one year of the end of therapy for the initial infection.[1] Although postinfectious damage to local host defenses and persistent behavioral patterns in partner selection are undoubtedly responsible for much of the recurrent disease, inadequate tracing and treatment of sexual partners is too frequently to blame. The incidence of PID, particularly gonococcal PID, is greatest among non-Caucasians of lower socioeconomic status.[3] This may reflect both that such women often have minimal access to health care and that reporting bias results when they finally do seek medical attention. They are likely to attend public clinics with well-established reporting procedures, while women from higher socioeconomic groups consult private practitioners who may not inform city or state agencies. There is no evidence that physiologic differences underlie the higher rate of PID in this group.

Table 1. Who is at Highest Risk for PID?

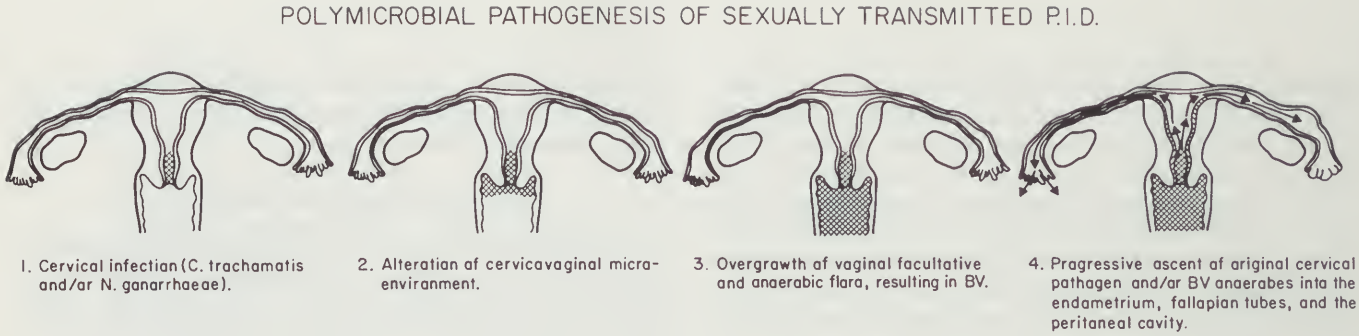
Sexually active adolescents
Nulliparous IUD users
Women with multiple sex partners
Women within 7 days of menses
Women with a history of PID
Non-Caucasians of low socioeconomic status

Pathogenesis and Sequelae

PID pathogenesis and microbial etiology usually is subdivided into primary and secondary, spontaneous and iatrogenic. "Primary" PID is the result of cannilicular ascent either of exogenous, sexually transmitted pathogens that have established themselves in the endocervix (for example, *Chlamydia trachomatis* or *Neisseria gonorrhoeae*) or of endogenous microorganisms that have overgrown in the vagina, such as enteric bacteria or anaerobes associated with bacterial vaginosis (BV). Secondary PID refers to upper tract infection that has spread from a contiguous focus such as an appendiceal abscess. This occurs in less than 1 percent of women with PID.[5] In 15 percent of cases of primary PID, upper tract infection follows transcervical uterine procedures such as dilation and curettage, suction abortion, hysterosalpingography, or IUD insertion.[5] In the remainder, infection occurs spontaneously and sexually transmitted pathogens can be recovered from half to three quarters of these cases.

Untreated, 8 to 10 percent of women with chlamydial cervicitis[6] and 10 to 19 percent of women with gonococcal cervicitis[1] develop upper tract infection. Even in the setting of gonococcal or chlamydial cervicitis, however, PID is usually a polymicrobial infection. In one series, one third of PID patients from whom *N. gonorrhoeae* was isolated from the cervix and 73 percent of PID patients without cervical *N. gonorrhoeae* had organisms other than *N. gonorrhoeae* or *C. trachomatis* recovered from peritoneal fluid.[7] Specimens usually contained multiple species, often both facultative and anaerobic. Our current concept of the pathogenesis of PID and the current CDC treatment recommendations reflect these data (Figure). Primary, noniatrogenic, sexually transmitted PID usually starts as a cervical infection with *C. trachomatis* and/or *N. gonorrhoeae*. The cervicovaginal microenvironment is then altered as rapidly growing cervical pathogens consume nutrients and produce metabolic waste products. Changes in parameters such as the availability of oxygen and in pH permit overgrowth of endogenous facultative and anaerobic flora and result in coexistent BV. When host defenses ebb, the original cervical pathogen and/or BV organisms ascend sequentially along contiguous mucosal surface into the endometrium, fallopian tubes, and peritoneal cavity. Ciliary motion and possibly spermatozoa[8] also may carry bacteria within the tubes.

This scenario implies that cervicitis and vaginitis will accompany pelvic infection in patients who have not



been instrumented. In fact, both microbiologic and histologic data suggest that a continuum exists from lower genital tract infection through endometritis to endosalpingitis and pelvic peritonitis.[9] Lower genital tract infection should, indeed, always be looked for in evaluating patients with suspected PID; its presence is highly supportive of the diagnosis of pelvic inflammatory disease.

The long-term sequelae of PID (Table 2) are largely the result of postinfectious scarring that often accompanies the healing process. Infertility occurs when bilateral intraluminal scarring interferes with the transit of sperm or ova by damaging the mucosa and cilia and by occluding the fallopian tubes. Peritubal scarring also may limit tubal motility and compromise the fimbrial ostia, thereby interferring with ovum capture. Today in countries such as the United States and Sweden, 17 to 25 percent of women who have had one or more episodes of PID are unable to achieve pregnancy.[1,10]

Studies from the preantibiotic era in which post-PID infertility rates of 60 to 70 percent were documented[6] indicate that timely initiation of antimicrobial therapy does influence future fertility. The fertility prognosis also is inversely related to number of episodes of PID: approximately 10 percent of women are infertile after a single episode of PID; almost 25 percent after two episodes; and over half after three or more episodes.[1,10] Among women with only one episode of PID, infertility rates increase both with increasing severity of inflammation assessed laparoscopically and with increasing patient age.[1,10]

Perhaps most important for the clinician, however, is the fact that nongonococcal infection leads to infertility almost three times as frequently as does gonococcal disease.[10] The association between chlamydial infection and infertility is particularly disturbing. Multiple studies have demonstrated significantly higher prevalences of antibody to *C. trachomatis* among infertile women with tubal damage than among women who are infertile due to other factors,[11,12] and one worker was able to recover *C. trachomatis* from 19 percent of women laparoscoped for evaluation of tubal infertility compared with 2 percent of controls.[13] Many of these infertile patients were not aware of ever having had upper-tract infection. Because of the indolence of chlamydial PID (see Clinical Manifestations and Diagnosis below) patients seek medical attention late, if at all. When they do present, greater diagnostic acumen may be necessary than in classical cases of fulminant gonococcal PID. Too often both physician and patient are lulled into a false sense of security in nongonococcal PID, and partly because of this, the long-range fertility prognosis is more grim than in gonococcal infection.

In contrast to postinfection infertility, postinfection ectopic pregnancy occurs when scarring markedly prolongs tubal transit time by partially obstructing the fallopian tube or by grossly damaging ciliary activity in a patent tube. Sperm reach the ovuum in the distal tube, but the enlarging embryo is trapped as it travels proximally. A woman who has had PID is 6 to 10 times as likely to have an ectopic pregnancy as is a woman who has never had upper-tract infection, and approximately 6 percent of such women will have extrauterine pregnancies the first time they conceive following PID.[6,10,14]

Chronic lower abdominal pain persisting for more than six months is incompletely understood but is probably due to extratubal scarring in most patients. The pain is often sufficiently severe that it interferes with routine activities and may exacerbate during the menstrual cycle when periovarian adhesions cause increased intraovarian pressure by restricting cylical ovarian enlargement. The syndrome occurs in 15 to 18 percent of women after pelvic infection and in the majority of these is associated with dyspareunia or

Table 2. What Are the Long-term Sequelae of PID?

Infertility
Ectopic pregnancy
Chronic pelvic pain syndrome
Recurrent infection

infertility.[10] For the clinician, such patients may be extremely frustrating. Hormonal suppression with continuous progesterone or danazole or laparoscopic lysis of adhesions have been used with some success in controlling chronic pain.

As discussed previously, due to impaired local host defenses, unaltered behavioral patterns, and incomplete contact tracing, recurrent pelvic infections develop in almost one quarter of women with PID.[1] Particularly because recurrent episodes are likely to be due to endogenous vaginal organisms, distinguishing between recurrent infection and an exacerbation of chronic pelvic pain syndrome is often extremely difficult in the absence of uterine or tubal studies. In such a dilemma laparoscopic evaluation should be considered.

Clinical Manifestations and Diagnosis

Management of the acute manifestations of PID and prevention of its chronic sequelae are confounded by the lack of specificity of the clinical manifestations of the disease. The constellation of (1) a history of lower abdominal pain, (2) evidence of abnormal vaginal or cervicovaginal discharge, and (3) tenderness on bimanual examination with or without elevations of temperature, white blood count (WBC), or sedimentation rate (ESR) traditionally has led to the clinical diagnosis of PID. Several groups have now demonstrated however, that among women laparoscoped for PID on the basis of such criteria only two-thirds have confirmation of the diagnosis.[15] Ten to 15 percent have other diagnoses including unilateral, emergent processes such as appendicitis or ectopic pregnancy and cyclical or chronic processes such as endometriosis, ovarian cyst, ovarian tumor, or adhesions associated with prior disease. Normal pelvic contents are seen in the remaining 20 to 25 percent. These are usually patients with severe cervicitis or with endometritis. Unfortunately, symptoms such as nausea and vomiting, dysuria, and abnormal vaginal bleeding, while present in 10 percent, 20 percent, and 35 percent of women with PID, respectively, are equally prevalent among laparoscoped women with normal fallopian tubes.[15] Objective indicators of inflammation such as temperature, WBC, and ESR are minimally helpful in assessing whether an individual patient has PID. Fever is present in one third of patients with laparoscopic evidence of PID, leukocytosis is present in 60 percent, and the sedimentation rate is elevated in 75 percent.[15] However, some or all of these parameters are frequently abnormal in appendicitis, pyelonephritis, ruptured ectopic pregnancy, and other entities that must be considered in the differential diagnosis.

Depending on the microbial etiology of the infection, the traditional clinical criteria for PID can be insensitive as well as nonspecific. In contrast to the abrupt, fulminant presentation of most gonococcal PID, chlamydial infection is typically characterized by a gradual onset and mild signs and symptoms.[16] It is not unusual for a patient with chlamydial PID to be totally unaware of her infection and to present either as a contact to a man with urethritis or for an apparently unrelated complaint such as rash or abnormal menstrual bleeding. Women with chlamydial PID may complain only of the right upper quadrant pain characteristic of Fitz-Hugh-Curtis perihepatitis. On examination, uterine and adnexal tenderness may be so mild that only adnexal fullness or a mass alerts the clinician to the possibility of infection. Fever and leukocytosis are unusual in chlamydial PID, although the ESR is often higher than in gonococcal PID.[16] As discussed previously, the diagnostic challenge presented by many patients with chlamydial PID is particularly pressing because of the poor fertility prognosis associated with this type of disease. Among patients with laparoscopically proved PID in Seattle, 60 percent had chlamydial infection.[17] With the recognition that in many populations in the United States—including the patients seen at the Baltimore City Health Department's STD Clinics (J. Long and E. Hook, unpublished data)—the prevalence of chlamydial infection now equals or exceeds that of gonococcal infection, diagnostic, therapeutic, and contact tracing efforts must shift to focus on the indolent but extremely morbid disease caused by this organism.

Nongonococcal, nonchlamydial PID, particularly anaerobic infection, is usually found in slightly older women, many of whom have either had prior pelvic infection or are IUD users. The signs and symptoms are generally intermediate in severity and duration between those found in gonococcal and in chlamydial disease.[16] Occasionally, however, anaerobic infection presents as severe illness with peritonitis, adnexal masses, and fever.

In light of the poor predictive value of many of the signs and symptoms traditionally associated with PID, the cornerstone of the clinical diagnosis has come to rest on the coexistence of bilateral uterine or adnexal tenderness and objective evidence of abnormal vaginal or cervicovaginal discharge. This means that minimal laboratory evaluation of any women in whom PID is suspected *must* include:

1. **a wet mount of vaginal secretions** to look for clue cells characteristic of bacterial vaginosis[18] and leukocytes (which Swedish investigators believe always outnumber other cellular elements in women with PID[6]).

2. **an endocervical gram stain** (obtained after the exocervix has been swabbed to clear vaginal secretions)

to look for gram negative intracellular diplococci and polymorphonuclear leukocytes (PMN)

3. **an endocervical culture** for *N. gonorrhoeae*; and
4. **an endocervical specimen** for culture or direct testing for *C. trachomatis*.

When chlamydia testing is unavailable, the cervical gram stain is particularly important. The presence of 30 or more PMN per 1000X field on a cervical gram stain free of vaginal contamination may indicate the presence of mucopurulent, nongonococcal cervicitis[19] and, in the context of uterine or adnexal tenderness, is highly supportive of the diagnosis of PID. In the event that the diagnosis of PID remains uncertain after clinical and laboratory evaluation, the patient should be hospitalized for further evaluation, which may include laparoscopy.

Therapy

On the basis of the microbiologic spectrum of PID and evidence that the infection is usually polymicrobic,[7] the CDC has published treatment recommendations[20] establishing that PID always should be treated with two antibiotics for at least 10 to 14 days (Table 3). In most settings doxycycline and cefoxitin are the antibiotics of choice. They provide the most well-balanced activity against *N. gonorrhoeae* (including penicillinase producing strains), *C. trachomatis*, anaerobes, and enteric organisms. When anaerobic infection is likely to be primary, for example in an older, monogamous IUD user, clindamycin and gentamicin may be preferable. This regimen does provide antichlamydial and antigonococcal coverage,[17] but it is inferior to the cefoxitin-doxycycline combination for these agents. Tetracycline, 500 mg PO QID may be substituted for doxycycline, but it is less active against anaerobes and compliance is often inferior because of the frequency of the doses.

Most experts agree that all patients with PID should be hospitalized for optimal therapy. In many clinical settings, however, this is not feasible for social, financial, or personal reasons. At a minimum, hospitalization is strongly recommended for patients in whom the fertility prognosis is an important consideration (particularly if, as in prepubertal and adolescent girls, compliance may be unreliable), patients with severe illness, patients in whom the diagnosis is uncertain, patients unable to tolerate oral therapy, and patients who fail to improve on outpatient therapy (Table 4).

Ancillary therapy for PID always should include removal of IUDs when present, instruction to abstain from sexual intercourse until test-of-cure studies are obtained, and examination and treatment of all male partners with whom the patient has had intercourse during the last 30 days. The importance of partner tracing, examination, testing, and treatment cannot be overemphasized. Over 80 percent of partners have not received treatment when women present with PID. Approximately 40 percent of male partners of women with PID have gonococcal or nongonococcal urethritis on examination, and 35 percent of these men are asymptomatic.[7] Because they are unaware of their infections, these men not only reinfect the original patient but also often infect other partners. Eradication of this reservoir of asymptomatic infection is crucial to control of PID both from an individual and from a public health standpoint. Partners should be treated appropriately for any STDs that are diagnosed. In addition, if gonococcal or chlamydial infection is documented in the patient with PID, regardless of the results of his own male partner should receive epidemiologic treatment for uncomplicated gonococcal and chlamydial disease.

All PID patients who are managed as outpatients should be reevaluated within 72 hours of initiation of therapy. Deterioration during that time or failure to

Table 3. Therapy of PID

For hospitalized patients

DOXYCYCLINE 100 mg IV Q12H plus CEFOXITIN 2.0 g IV Q6H.
Complete 10 to 14 day course of therapy with DOXYCYCLINE 100 mg PO BID

CLINDAMYCIN 600 mg IV Q6H plus GENTAMICIN 1.5 mg/kg IV Q8H (after 2 mg/kg IV loading dose).
Complete 10 to 14 day course of therapy with CLINDAMYCIN 450 mg PO QID

IV antibiotics should be administered for at least 4 days and 48 hours after clinical improvement.

For ambulatory patients

CEFOXITIN 2 g IM or AMPICILLIN 3.5 g PO (each with PROBENECID 1 g PO)

PLUS

DOXYCYCLINE 100 mg PO BID for 10 to 14 days.

* Test-of-cure endocervical studies should be obtained 7 days after completion of antibiotics in any patient in whom initial studies were positive for *N. gonorrhoeae* or *C. trachomatis*.[20]

Table 4. Who Should be Hospitalized for PID?

Prepubertal and adolescent girls
Pregnant women
Patients with severe illness (e.g., signs of tubovarian abscess or peritonitis, fever ≥ 101°F, etc.)
Patients in whom the diagnosis of PID is uncertain (e.g., possible appendicitis or ectopic pregnancy)
Patients unable to tolerate oral therapy due to nausea and vomiting
Patients who fail to improve after 3 to 5 days or who deteriorate at any time while on outpatient therapy

improve within an additional 48 hours is an indication for hospitalization. Test-of-cure studies should be obtained seven days after completion of antibiotic therapy in patients from whom pretherapy studies were positive.

Summary

Pelvic inflammatory disease presents both to clinicians and to public health workers the challenge of a communicable disease that may be difficult to diagnose and often has life-long, devastating consequences. Shifts in social mores resulting in younger coital debut, multiple partners, and wider contraceptive acceptance demand that every physician who cares for sexually active women of reproductive age, regardless of social stratum, be aware of the risk factors predisposing to PID; the "silent" chlamydial end of the clinical spectrum of PID; the importance of systematic evaluation for vaginitis and cervicitis in patients with suspected PID; and the need for dual antibiotics and contact tracing in the therapy of PID.

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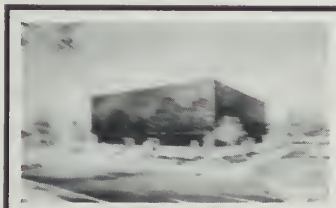
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Viral STDs: Herpes Simplex and Human Papillomavirus

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Sexually transmitted viral infections have become increasingly prevalent in our society. This group of viruses, which includes herpes simplex virus (HSV), human papillomavirus (HPV), hepatitis A and B viruses, cytomegalovirus (CMV), and the human immunodeficiency virus (HIV), causes a wide variety of clinical disease states. Genital herpes, warts, cervical carcinoma, hepatitis, neonatal encephalitis, mental retardation, and acquired immunodeficiency syndromes (AIDS) are only a few of the clinical manifestations secondary to these viruses. As a group they have become the most common sexually transmitted agents and have a tremendous economic impact on our society.

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In the past, most viral STDs went unrecognized and untreated. However, with the advent of new diagnostic tests, including viral cultures, immunodiagnostic assays, and the development of antiviral therapy and viral vaccines, the scientific community has made great advances in defining the epidemiology, natural history, clinical manifestations, diagnosis, treatment, and prevention of these infections. Viral STDs undoubtedly will continue to grow in importance during this decade. We anticipate that major advances in the field of sexually transmitted diseases will be in the further development of effective therapeutic and preventive measures to control these infections. We review briefly the present knowledge on two of the most common viral STDs, herpes simplex virus and human papillomavirus.

Herpes Simplex Virus

Infection caused by herpes simplex virus (HSV) has been known for centuries, but only in the past few decades has the full clinical spectrum of the disease been recognized. HSV infections include asymptomatic infection, cold sores or fever blisters, keratitis, encephalitis, genital herpes, and disseminated neonatal herpes. The most notable characteristic about HSV is that it can establish latent infections and subsequently induce recurrences, some of which may result in asymptomatic viral shedding enhancing transmissibility. Genital infections with HSV affect an estimated 10 to 20 million persons in the United States with approximately 500,000 new cases occurring annually.[1]

The herpesviruses (which consist of herpes simplex virus, cytomegalovirus, varicella-zoster virus, and Epstein-Barr virus) are enveloped, ether-sensitive viral particles measuring 150 nm in diameter and containing linear, double-stranded DNA.

Epidemiology

The humoral response to HSV has been used to estimate the extent of viral infection. Whereas antibodies to HSV-1 are highly prevalent in all age groups of our population, antibodies to HSV-2 are not routinely detected until puberty, and antibody prevalence rates are correlated with sexual activity. HSV-2 antibodies have been detected in 80 percent of female prostitutes, up to 60 percent of adults of lower socioeconomic status, 25 percent of adults of middle to high socioeconomic status, and 3 percent of nuns.[2]

It should be emphasized that the titer of HSV in cultures from *clinical lesions* is 100 to 1,000 times higher than in cultures from salivary or genital tract secretions from asymptomatically excreting persons. Thus the efficiency of transmission is likely to be greater during symptomatic periods of viral excretion than during asymptomatic periods.

Clinical Spectrum of Genital Herpes

Primary genital herpes is characterized by fever, headache, malaise, and myalgias. Pain, itching, dysuria, vaginal and urethral discharge, and tender inguinal adenopathy are the predominant local symptoms. Clusters of 2mm vesicles or ulcers on an erythematous base are characteristic. Involvement of the cervix and urethra is seen in more than 80 percent of women with first episode infections.[1,3]

First episodes of genital herpes in patients who have had prior HSV-1 infections are associated with less frequent systemic symptoms and are faster healing than primary genital herpes.[3] The clinical course of acute first episode genital herpes among patients with HSV-1 and HSV-2 infections is similar. However, the recurrence rate of genital disease caused by the two subtypes differ. More than 80 percent of patients with first episode HSV-2 infection have a recurrence within 12 months (median number of recurrences, 4), as compared with 55 percent of those with primary HSV-1 infections (median number of recurrences, <1).[1] Recurrence rates of genital HSV-2 infections vary greatly among individuals and over time within the same individual.

Rectal and perianal HSV infections are being diagnosed increasingly, particularly among homosexual and heterosexual women who engage in anal intercourse.[4] Symptoms of HSV proctitis include anorectal pain, anorectal discharge, tenesmus, and constipation. Auto-

nomic nervous system dysfunction, manifested by sacral paresthesias, impotence, and urinary retention is frequently encountered. Sigmoidoscopy reveals ulcerative lesions of the distal ten centimeters of the rectal mucosa. Extensive perianal herpetic lesions and HSV proctititis may occur in patients with AIDS.

Complications

Complications of genital HSV infection include herpetic whitlow, cervicitis, disseminated neonatal infections with encephalitis, and the psychologic sequelae of genital herpes. Herpetic whitlow or HSV infection of the finger may occur as a complication of primary oral or genital herpes by inoculation of the virus through a break in the epidermal surface. Clinical signs and symptoms include abrupt onset of edema, erythema, and localized tenderness of the infected finger. Vesicular or pustular lesions of the fingertip are frequently associated with fever, epitrochlear and axillary lymphadenopathy.

HSV encephalitis is the most commonly reported viral infection of the central nervous system in the United States accounting for 10 to 20 percent of all cases.[1] Neonates appear to have the highest frequency of visceral and central nervous system infection of any HSV-infected patient population. In Seattle, the incidence of neonatal herpes has increased from 2 cases per 100 thousand live births during 1966 to 1969 to 13.8 cases per 100 thousand live births during 1978 to 1982.[5] Approximately 70 percent of neonatal HSV cases have been related to HSV-2 infection, almost all of which resulted from contact with infected genital secretions at the time of delivery. Neonatal HSV-1 infections are usually acquired postnatally through contact with immediate family members with symptomatic or asymptomatic oral-labial HSV-1 infection or from nosocomial transmission.[5] If untreated, more than 70 percent of neonatal herpes cases will lead to disseminated or central nervous system infection. In untreated patients, the overall mortality is 65 percent, and less than 10 percent of neonates with CNS infection have normal development. Fortunately, antiviral chemotherapy has reduced the mortality from neonatal herpes to 25 percent.[1]

The clinical hallmark of HSV encephalitis in children and adults is the acute onset of fever and focal neurologic, especially temporal-lobe, symptoms. No reliable noninvasive radiologic or virologic technique has been developed to diagnose HSV encephalitis during its early clinical stages, and differentiation of HSV encephalitis from other infectious types of viral encephalitis and noninfectious processes is difficult. Definitive diagnosis of herpes encephalitis requires a brain biopsy.

Diagnosis

Diagnosis of HSV infection is based on the clinical appearance of multiple punctate vesicles or ulcers, and subsequent laboratory confirmation. Lesions of genital herpes are painful when touched and this clinical sign may be useful in differentiating coalesced genital herpetic ulcers from other etiologies such as syphilitic ulcerations. Both primary and recurrent HSV infections are accompanied by tender lymphadenopathy. Suppuration, commonly seen with chancroid and/or lymphogranuloma venereum, is only rarely seen in genital HSV infection.

Viral isolation is the most sensitive and specific method of confirming the diagnosis of genital herpes. HSV causes a discernible cytopathic effect in cell culture within 48 to 96 hours after inoculation. Tissue culture and immunologic detection methods using monoclonal antibodies to HSV have been successfully combined to shorten the time required to identify HSV. Immunofluorescent assays using monoclonal antibodies and some DNA hybridization procedures have approached the sensitivity of viral isolation for detecting HSV from genital or oral/labial lesions.[6] The sensitivity of serologic tests is not as high as viral isolation, and such tests are only useful in documenting primary infection, since nearly all patients with primary genital herpes seroconvert.

Therapy

Therapy of genital herpes includes the following goals: shortening the clinical course of disease, preventing or suppressing subsequent recurrences, and decreasing the transmission of disease. The development of acyclovir (Zovirax) has made a major advance in achieving some of these goals. Although it does not prevent or eradicate latency, acyclovir has been shown to be effective in shortening the duration of both symptoms and lesions of mucocutaneous HSV infections in both immunocompromised and immunocompetent infected individuals.[6–9]

The daily administration of 200 mg capsules of oral acyclovir, 5 times a day, for 5 to 10 days improves the healing and resolution of symptoms of both first and recurrent episodes of genital HSV-1 and HSV-2 infections. In several recent studies, over 80 percent of patients with a previous history of monthly recurrences of genital herpes were free from subsequent recurrences during a 6-month treatment period (at doses of 200 mg capsules, 2 to 3 times daily.[8–11] Long-term suppressive therapy with oral acyclovir, however, did not eliminate ganglionic latency, with reactivation of disease occurring immediately after therapy was discontinued. Suppressive therapy can be maintained for up to a year since it is well tolerated with few side effects.

Use of the drug during pregnancy is not recommended. Pregnant women with a history of genital herpes should be counseled carefully and cultured weekly during the last month of pregnancy to prevent neonatal acquisition of genital herpes. If neonatal HSV infections do occur, treatment with intravenous acyclovir or vidarabine is recommended. A recent comparison trial of these two drugs demonstrated that intravenous acyclovir (5 mg/kg 8 qh) appeared to be more effective than vidarabine, and consequently, has become the drug of choice for neonatal herpes and HSV encephalitis.[12]

Prevention

Currently, no proved effective means of HSV prophylaxis has been established. Barrier forms of contraception, especially condoms, may decrease transmission of disease, but transmission of the disease when lesions are present may occur despite the use of a condom.

The development of an HSV vaccine may be the only effective means for complete prophylaxis of infection. Data from animal models indicate that vaccination with a variety of live or inactivated preparations can prevent the acquisition of mucocutaneous lesions and markedly reduce the risk of subsequent development of ganglionic latency. Since HSV can transform cells *in vitro* and has been epidemiologically associated with cervical and vulva carcinomas, possibly in concert with human papillomavirus, there are major considerations of safety regarding a live virus HSV vaccine. However, the use of recent recombinant DNA technology to produce large amounts of potent viral antigens or to produce purified subunit vaccines may be more safe and effective, provided the right subunits are chosen and immunopathogenic reactions can be avoided.[1,6,8]

Human Papillomavirus

Human papillomavirus (HPV) is the virus responsible for genital warts. Described since antiquity, genital warts, also known as venereal warts and condyloma acuminata, were at various times thought to be related to syphilis and to gonorrhea. Only within the last century has the viral etiology of genital warts been discovered, and even more recently, that HPV was found to be the specific virus.[13]

Until recently, genital wart virus infections have been neglected, relative to other sexually transmitted diseases for several reasons: (1) the belief that genital warts were not as common as other sexually transmitted infections; (2) the thought that HPV produces only mild epithelial changes with no severe long-term consequences, and (3) the difficulty in diagnosing macroscopically invisible infections, such as flat condyloma of the cervix.[14] However, with recent advances in the knowledge of the scope of HPV infections, much interest, both from clinical and research perspectives, has been stimulated.

Infectious Agent and Spectrum of Disease

HPV virions are nonenveloped icosahedral particles, 45 to 50 nm in diameter, the genome of which is a molecule of double-stranded, circular DNA. Belonging to the papovavirus family, all wart viruses are designated papillomaviruses and are widely distributed in mammals. All are species-specific, and each species may have several distinct types. There are 25 viruses of humans (HPV types 1 to 25) that cause a variety of clinical wart syndromes depending on the site of infection and morphology of the wart. These include such distinct entities as (1) skin warts, such as common warts, plantar warts, and the syndrome of Epidermodysplasis Verruciformis (EV); (2) warts involving the respiratory tract, also known as laryngeal papillomatosis; (3) warts of the oral cavity; and (4) anogenital warts. The HPV types responsible for the large majority of anogenital lesions include HPV-6, HPV-11, HPV-16, and HPV-18 and, occasionally, HPV-1 and HPV-2. Unlike skin warts, genital warts have been associated with premalignant and malignant lesions in males and females.

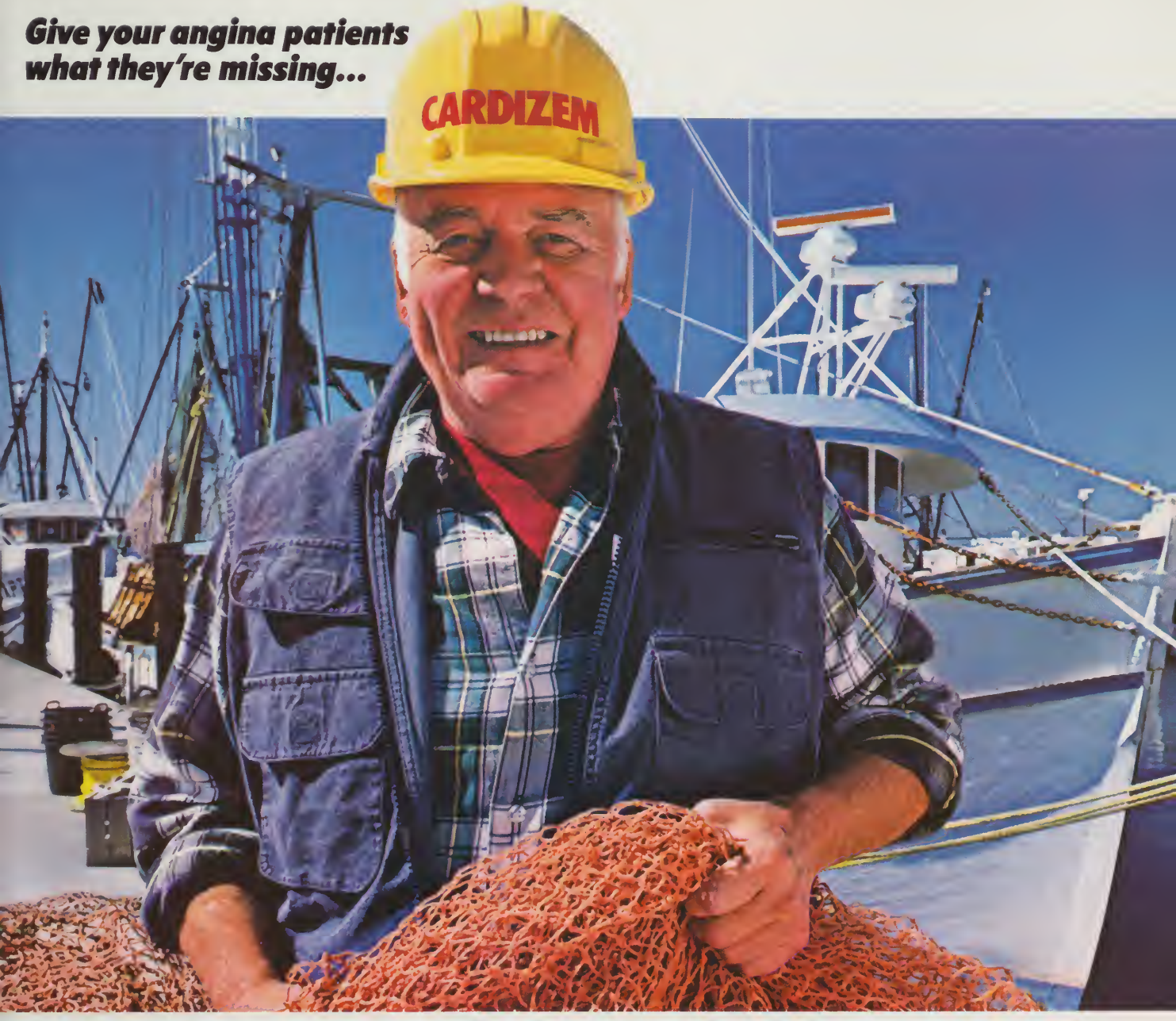
The incubation period is approximately one to two months, but eight- to nine-month incubation periods have been reported. In most cases, warts are benign and self-limited, regressing eventually with no intervention. However, conversion of a benign to a malignant lesion may occur and appears to be related to specific viral types in conjunction with genetic, immunologic, or environmental factors.[15]

Epidemiology

Genital tract infection with HPV is increasing in incidence, with recent estimates showing that the number of consultations with private physicians in the United States for condylomata acuminata increased from 169,000 in 1966 to 946,000 in 1981, a 5.6-fold increase.[16] In comparison, the number of similar consultations in 1981 for genital herpes was 295,000. It is now appreciated that papillomavirus infection is the most common cause of squamous cell abnormalities in Papanicolaou smears, with as many as 1.3 to 1.6 percent of routinely obtained Pap smears showing evidence of cytopathology consistent with papillomavirus infection.[15,17–19]

Genital warts occur predominantly in young adults and in sexually promiscuous populations, with an age distribution similar to that of patients with gonorrhea.[13,20] Warmth and moisture may accelerate the

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PRECAUTIONS

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Drug Interaction. *Phormocologic studies indicate that there moy be odditive effects in prolonging AV conduction when using beto-blockers or digitolis concomitontly with CARDIZEM. (See WARNINGS.)*

Controlled ond uncontrolled domestic studies suggest thot concomitont use of CARDIZEM ond beto-blockers or digitolis is usuolly well tolerated. Avoiloble dato ore not sufficient, however, to predict the effects of concomitont treatment, porticulorly in patients with left ventriculor dysfunction or cordioc conduction obnormolities. In healthy volunteers, diltiozem hos been shown to increase serum digoxin levels up to 20%.

Corcinogenesis, Mutagenesis, Impairment of Fertility. *A 24-month study in rats ond o 21-month study in mice showed no evidence of corcinogenicity. There wos olso no mutogenic response in in vitro bacteriol tests. No intrinsic effect on fertility wos observed in rats.*

Pregnancy. *Category C. Reproduction studies hove been conducted in mice, rats, ond robbits. Administration of doses ronging from five to ten times greater (on o mg/kg basis) thon the doily recommended therapeutic dose hos resulted in embryo ond fetol lethality. These doses, in some studies, hove been reported to couse skeletol obnormolities. In the perinatol/postnatal studies, there wos some reduction in early individuol pup weights ond survivol rotes. There wos on increased incidence of stillbirths ot doses of 20 times the human dose or greater.*

There ore no well-controlled studies in pregnont women; therefore, use CARDIZEM in pregnont women only if the potentiol benefit justifies the potentiol risk to the fetus.

Nursing Mothers. *Diltiozem is excreted in human milk. One report suggests thot concentrations in breast milk moy opproximate serum levels. If use of CARDIZEM is deemed essentiol, on olternative method of infont feeding should be instituted.*

Pediatric Use. *Safety ond effectiveness in children hove not been estoblished.*

ADVERSE REACTIONS

Serious odverse reactions hove been rore in studies corried out to date, but it should be recognized thot patients with impoired ventricular function ond cordioc conduction obnormolities hove usuolly been excluded.

In domestic plocebo-controlled triols, the incidence of odverse reactions reported during CARDIZEM therapy was not greater thon that reported during plocebo therapy.

The following represent occurrences observed in clinicol studies which can be ot least reasonobly ossociated with the phormocology of calcium influx inhibition. In mony coses, the relationship to CARDIZEM hos not been estoblished. The most common occurrences os well os their frequency of presentotion ore: edema (2.4%), heodoche (2.1%), nousea (1.9%), dizziness (1.5%), rosh (1.3%), osthenio (1.2%). In addition, the following events were reported infrequently (less thon 1%):

Cardiovosculor:	*Angina, orrhythmio, AV block (first degree), AV block (second or third degree — see conduction warning), brodycordio, congestive heart foilure, flushing, hypotension, polpitations, syncope.*
Nervous System:	*Amnesio, goit obnormolity, hollucinations, insomnio, nervousness, poresthesio, personolity change, somnolence, tinnitus, tremor.*
Gastrointestinol:	*Anarexia, constipation, diorrhea, dysgeusio, dyspepsio, mild elevations of olkoline phosphatase, SGOT, SGPT, ond LDH (see hepatic wornings), vomiting, weight increase.*
Dermatologic:	*Petechioe, pruritus, photosensitivity, urticorio.*
Other:	*Amblyopio, dyspnea, epistoxis, eye irritation, hyperglycemio, nasal congestion, nocturio, osteoarticulor poin, polyurio, sexuol difficulties.*

The following postmorketing events have been reported intrequently in patients receiving CARDIZEM: olopecio, gingivol hyperplosio, erythemo multiforme, ond leukopenio. However, o definitive cause ond effect between these events ond CARDIZEM therapy is yet to be estoblished. *Issued 7/86*

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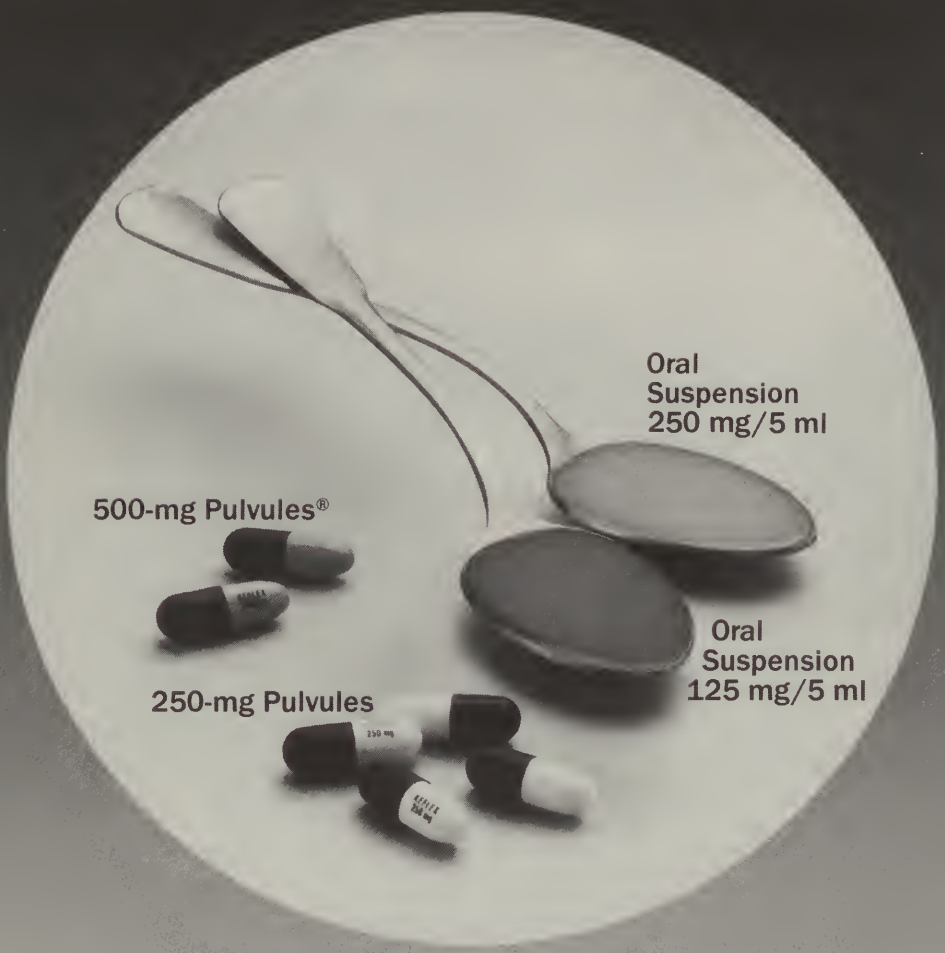
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growth of warts, as can pregnancy. Defects in cell-mediated immunity can predispose patients to the development of warts.[20]

Genital warts are transmitted sexually with between 50 and 70 percent of exposed sexual partners either having, or developing, warts.[13,15,21,22] There is a strong association between the presence of condyloma acuminatum and the presence of other STDs, such as gonorrhea, syphilis, chlamydia, or trichomonas[13,21] Homosexual males, who are at increased risk for perianal warts, have been observed to be frequently coinfected with gonorrhea or syphilis.[21] Though the mode of transmission traditionally has been thought to be direct contact with warts, a recent study has detected HPV in semen.[23]

Clinical Manifestations and Sequelae

Condylomas may be flat (condyloma planum) or exophytic (condyloma acuminatum). In the male, exophytic warts may affect any part of the penis, the urethra, the perineum and perianal areas, and the scrotum, and are more common in circumcised than in uncircumcised men.[13] In females, exophytic warts may appear in the vaginal introitus, the vulva, the perineum, the anus, and less frequently, the cervix. Often, condylomas are found at more than one site in the genital tract.[18] In most cases, condylomas regress spontaneously or respond to treatment.

In addition to the discomfort and embarrassment associated with their presence, complications due to genital warts include ulceration, secondary infection, hemorrhage, and mechanical problems with large masses of warts. Special complications of genital warts during pregnancy include transmission to the infant during birth (with the possible development of juvenile laryngeal papillomas) and obstruction of the birth canal itself.

Possibly more serious than the above complications is the development of "giant condyloma" or Buschke-Lowenstein tumors, which are histologically benign but clinically aggressive wartlike lesions occurring mostly in males.[13] Another possibility is the carcinomatous transformation of genital warts, with both squamous cell carcinoma and intraepithelial carcinoma being described in association with condylomata acuminata of the penis, vulva, and rectum.[13,15]

Recently, increasing attention has been focused on the association between HPV infection and cervical carcinoma. Carcinoma of the cervix is a multistage disease developing over a long time and preceeded by abnormalities of the cervical epithelium, known as dysplasia or cervical intraepithelial neoplasia (CIN).[15,24,25] Several logical considerations have led to the study of the possible etiologic role of HPV in the development of cancer of the cervix. These include (1) cervical carcinoma has the epidemiologic characteristics of a sexually transmitted disease; (2) cervical carcinoma originates in the transformation zone, the same site where HPV infects; (3) flat cervical warts are being recognized in cases previously labeled as dysplasia; and (4) in some studies, dysplasia and condyloma coexist in the same histologic section.[15,25]

Diagnosis

The diagnosis of condyloma acuminatum usually is based on history and appearance of the lesion. Anogenital warts must be differentiated from other papillomatous lesions including anatomic variants, benign and malignant neoplasms, and other infectious conditions. Of the latter, the most important lesions to differentiate are condylomata lata of secondary syphilis. As genital warts and condyloma lata may coexist, the performance of serologic tests for syphilis and dark-field microscopy of suspicious (especially ulcerating) lesions is strongly recommended. In the appropriate epidemiologic circumstances, the lesions of donovanosis or molluscum contagiosum may be confused with genital warts.

If there is question as to the diagnosis after macroscopic visualization alone, referral for further diagnostic evaluation should be considered. Colposcopy, anoscopy, and urethroscopy, are used for better examination of suspected cervical, anal, and urethral lesions. Cytologic diagnosis via a Pap smear of the cervix, or a scraping of an external lesion, is helpful. As histologic examination of the tissue traditionally has been used as the "gold standard" for diagnosing HPV infection, a biopsy should be considered for any puzzling lesion. Although cell culture is not available, electron microscopy has been successfully used to identify HPV particles in biopsy specimens. More recently, molecular hybridization has shown the most promise in detecting HPV in scraping and biopsies of lesions.[14]

Treatment

As with all other sexually transmitted diseases, the importance of examining for coexisting infections, such as gonorrhea or syphilis, **prior** to treatment of genital warts cannot be overemphasized. In addition, it is important to examine the sexual partners for presence of warts in the case of a male contact, and the presence of external warts or an abnormal Pap smear in the female contact. Contacts should be treated if there is evidence of HPV infection. Women with external warts should routinely have a Pap smear and be considered for colposcopy, since vaginal and cervical warts often coexist with external warts. Genital warts in the pregnant patient present special problems, and should be man-

aged in consultation with an expert. In patients with intraurethral warts, urethroscopy should be performed. Similarly, treatment of anal warts requires the use of anoscopy. All atypical or persistent warts should be biopsied.[26]

Specific Therapies

Therapy of genital warts includes: (1) caustic agents (most commonly 10 to 25 percent podophyllin); (2) antimetabolites (5-FU); (3) destructive methods (cryotherapy, laser); (4) surgical excision; (5) immunotherapy, and (6) antiviral therapy.[15,21,26] As all warts show unpredictable behavior and may regress spontaneously, and since no one method of treatment is superior to another, treatment should be individualized.

In general, for external genital or perianal warts, cryotherapy (liquid nitrogen or carbon dioxide) or podophyllin (10 percent in compound tincture of benzoin) is recommended. With podophyllin therapy, care must be taken to avoid application to normal tissue, and to wash off thoroughly after no longer than four hours. Podophyllin treatments may be repeated once or twice weekly; however, if warts do not regress after four applications, alternative treatments should be used. Podophyllin should not be used during pregnancy or for cervical, intraurethral, or oral warts. It should be used only with great care (due to possible absorption and toxicity) in the treatment of vaginal or anal warts. 5-FU is useful in treatment of intraurethral, vaginal and cervical warts.[26]

Surgical excision is generally reserved when other therapeutic regimens have been ineffective.[15,21] Autogenous vaccines have been used for resistant genital warts, despite lack of consistent success.[15] Currently, interferons, both systemic and intralesional, are under investigation for treatment of recalcitrant lesions. They show promise.[15]

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Sexually Transmitted Diseases and the Gay Male

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A large number of infections are sexually transmitted among gay men. Treatment recommendations for gonorrhea and syphilis in these patients are different than for heterosexuals. Enteric pathogens, both bacterial and protozoan, present with specific clinical syndromes. To prevent subsequent transmission, treatment must both alleviate symptoms and eliminate the organism. Although all forms of viral hepatitis are sexually transmitted among gay men, the consequences of hepatitis B are most severe. The high risk for this infection mandates use of the available vaccine, which has been shown to be both safe and effective.

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Recognition of the Acquired Immune Deficiency Syndrome has focused increased attention on the unique features of other sexually transmitted diseases among gay males. It was only in 1973 that the reported high prevalence of viral hepatitis among homosexual men lead to the realization that this disease was sexually transmitted.[1] Subsequent observations resulted in the description of the "gay bowel syndrome" in 1977 and increased our understanding of the spread of enteric pathogens through sexual activity.[2] These observations have broadened the definition of STDs to include those infections for which sexual activity is just one of several vectors.

Accurate diagnosis and appropriate management depend on three factors: taking an adequate sexual history, familiarity with those organisms that may result in disease, and conducting a thorough microbiologic investigation.

Obtaining an Adequate Sexual History

Sexual habits and practices play a key role in determining each patient's risk of infection. Unfortunately, gay men often fail to share knowledge of their sexual orientation with their primary health provider[3]; therefore, the physician must be careful to obtain an accurate sexual history on every patient. The interview should be conducted in a candid, nonjudgmental style, and the patient should be assured of confidentiality. It is useful to devise a code to denote sexual preferences and practices on the patient's record; this will protect the patient's information from others who need not have access to it.

The sexual history should include the sex of partners, number of partners, whether partners are anonymous, and specific types of sex acts performed (Table 1). Avoid labels; patients may have occasional same-sex activity but deny being "gay" or "bisexual." Asking "Do you have sex with men, women, or both?" is more useful, and will better direct the subsequent evaluation.

Surveys have suggested that the average gay male may have as many as 1,000 lifetime sexual partners, with over half of these one-time contacts. It is this large number of different partners that results in the hyperepidemic spread of sexually transmitted infections among gays. Sexual partners may often be anonymous, and in gay bathhouses, adult bookstores, and "back rooms" of gay bars, a patron may have multiple sexual encounters in one evening. Such anonymous encounters make contact tracing nearly impossible. Men with large numbers of different sexual partners, those who frequently have anonymous sexual encounters, those who engage in prostitution, and men who often engage in anal intercourse and anilingus appear to be at greatest risk of contracting venereal infections. They should be examined more frequently than men whose patterns do not include such characteristics.[4]

Knowledge of the patient's specific sexual practices is essential to guide the medical evaluation and to avoid inappropriate treatment. All too commonly, a gay man may be treated for rectal gonorrhea even though he does not engage in anal intercourse. Fellatio, anal intercourse, and anilingus each predispose the gay man to specific infections. The extragenital manifestations of common STDs such as gonorrhea, syphilis, and herpes may be hard to recognize and are often associated with constitutional symptoms. Enteric pathogens are spread efficiently by oral-fecal contact, and a variety of diarrheal diseases are easily transmitted during sex.

Sexually Transmitted Pathogens

Organisms associated with sexual transmission in gay men are listed in Table 2.[5] "Gay bowel syndrome" refers to the frequent gastroenterologic manifestations of STDs in gays. Symptoms of many infections may be brief or absent. At other times, constitutional symptoms may be sufficiently severe to warrant hospitalization. In all cases, treatment must be directed at both relief of symptoms and eradication of the organism, to pre-

Table 1. Elements of the Sexual History

Sex of partners
Number of partners
Any anonymous partners
Contact with prostitutes
Type of sex acts performed

vent further transmission.

Anorectal symptoms suggestive of proctitis (Table 3) represent a complex and common problem among gay males.[6] Complaints of rectal pain, discharge, mucous coating on stools, or rectal bleeding should prompt a thorough investigation. While *N. gonorrhea* is the most frequent cause of symptomatic disease, mixed infections with multiple organisms are common. Evaluation of anorectal complaints requires direct inspection of the anal canal. An inexpensive disposable anoscope is useful to detect mucosal abnormalities such as ulcerations, vesicles, or mucopurulent exudates. Anoscopy and rectal Gram's strains should be part of the routine clinical examination. Specimens obtained via anoscope are far superior to those obtained blindly, and accuracy of diagnosis can be improved 30 to 50 percent.[7]

Gonorrhea is responsible for 30 to 40 percent of cases of symptomatic proctitis. It is important to obtain periodic rectal cultures from those men who practice anal intercourse. Auxotyping of *N. gonorrhea* isolates from gay men reveal that these strains tend to be more resistant to penicillin and tetracycline.[8] This may explain the high failure rates for ampicillin and tetracycline in rectal infections. Since these same strains may be isolated from the penis or pharynx, treatment of uncomplicated gonorrhea in gay males requires the use of either injectable aqueous procaine penicillin, 4.8 million units IM with 1 gram of probenecid, or ceftriaxone 250 mg. IM. Spectinomycin, 2 grams IM may be used for penicillin allergic patients. Homosexual men are less likely than heterosexual men to have coexistent chlamydial infections; routine additional tetracycline or doxycycline treatment is not recommended. It is important to perform follow-up cultures to ascertain cure and to identify antibiotic resistant strains.

Herpes simplex and syphilis also account for a significant amount of rectal disease and are hard to distinguish. Both may be associated with rectal pain and ulceration, inguinal adenopathy, and constitutional symptoms such as fever and malaise. A sacral radiculomyelopathy may result from nerve plexus irritation, and either constipation or urinary retention may be an important clue to the presence of these infections. Darkfield examination of rectal specimens are not reliable for the diagnosis of syphilis, as nontreponemal spirochetes may be present in stool. Cultures for herpes are often unsuitable because of contamination by other stool organisms.

Half the reported syphilis cases seen in the United States are in gay men. Syphilis serology should be obtained periodically on all sexually active gay men, and certainly on those with rectal symptoms. If compliance with follow-up testing cannot be assured, it may be prudent to empirically treat for syphilis that individual with anorectal symptoms and inguinal adenopathy. The VDRL may require as long as six weeks from the time of primary infection to become reactive, and it is important to repeat this test after a suitable interval in those symptomatic patients where no other organism is identified. Injectable benzathine penicillin, 2.4 million units, is the treatment of choice for primary syphilis. Since the chancre is easily overlooked, especially if at the anus or pharynx, secondary or latent syphilis are not uncommon. The VDRL is a mandatory part of the evaluation of any rash or alopecia in the homosexual male. Treatment of syphilis of long or unknown duration requires additional benzathine penicillin.

Vesicles or ulcerations in the anal area may suggest herpes, and giemsa-stained specimens may show multinucleated giant cells. Commercial herpes cultures are also generally available. Serologic testing for herpes antibodies are only minimally useful, and the diagnosis should be confirmed by culture. Acyclovir ointment is useful for the initial herpes infection, but only oral therapy has been shown to be effective for subsequent outbreaks.

Chlamydia trachomatis is another common pathogen causing acute proctitis. Although laboratory tests for detecting chlamydia are becoming widely available, diagnosis and treatment frequently are based on the clinical syndrome. Other etiologies should be carefully ruled out. Either tetracycline, 500 mg orally 4 times daily for 7 days, or doxycycline 100 mg orally twice

Table 2. Organisms Associated with Sexual Transmission

Bacteria	
Neisseria gonorrhea	*Chlamydia trachomatis*
Shigella	*Treponema pallidum*
Campylobacter species	*Salmonella*
Protozoa	
Giarda lamblia	*Entameba histolytica*
Viruses	
Hepatitis A	Herpes simplex
Hepatitis B	Human papilloma virus

Table 3. Presenting Symptoms of Proctitis

Anal discharge
Rectal pain
Diarrhea
Constipation
Bloody stools
Tenesmus
Abdominal pain
Fever
Pruritis ani

daily for 7 days have been shown to be effective. Sulfamethoxazole, 1 gram by mouth twice daily for 10 days is also effective.

Proctocolitis in gay men is typically associated with symptoms of proctitis plus diarrhea, and may be caused by Campylobacter jejuni, Shigella species, Salmonella species and amebiasis. Enteritis usually results in diarrhea without signs of proctitis and is often caused by Giardia lamblia. Treatment should be based on etiologic diagnosis from laboratory examination of adequate stool samples. Intestinal parasites can be diagnosed from formalin-preserved samples; collection kits are available from commercial laboratories and the Maryland State Laboratory. Many parasite strains found in the intestinal tract of homosexual males are considered to be nonpathogenic and may not require treatment. However, these may suggest the need for additional samples, as any individual sample may be insufficient for accurate diagnosis in the symptomatic patient.

Elimination of the carrier state is an important goal in treating sexually transmitted enteric infections. Campylobacter and Shigella may persist for months after symptoms resolve in the untreated patient, and half of those with Giardiasis are asymptomatic. Sexual contacts also should be tested and treated. Erythromycin, 500 mg by mouth 4 times daily for 7 days is the drug of choice for *C. jejuni* infection. Shigella species demonstrate the development of antibiotic resistance, and treatment should be based on local sensitivity patterns. In most areas, the usual treatment is trimethoprim/sulfamethoxazole 160/80 mg by mouth twice daily for 7 days. The regimen of choice for amebiasis consists of a systemic drug, metronidazole 750 mg orally 3 times daily for 10 days, plus a lumenal amebicide, either Iodoquinol 650 mg by mouth 3 times daily for 20 days or diloxanide furoate 500 mg by mouth 3 times daily for 10 days. Giardiasis responds to quinacrine 100 mg orally 3 times daily for 7 days, or metronidazole 250 mg by mouth 3 times daily for 7 days.[9]

Hepatitis

Viral hepatitis is now well recognized among gay men. The hepatitis A virus has been found in stool but not in urine or other body fluids, and can be transmitted by sexual or close personal contact. Greatest infectivity is during the 2-week period immediately before the onset of jaundice. The diagnosis is confirmed by finding IgM-class antibody to the hepatitis A virus in serum. Sexual contacts of the index case should be treated with 0.02 ml/kg of immune globulin (formerly called "gamma globulin") as soon as possible after exposure. The prophylactic value of IG is greatest (80 to 90 percent) when given early in the incubation period. Giving IG more than 2 weeks after exposure is not indicated.

Sexual transmission of non-A, non-B hepatitis has been reported, and multiple episodes have been observed in the same individuals; these may be due to different agents. Experimental studies have confirmed the existence of a carrier state; no serologic tests have yet been developed. The value of prophylaxis with IG has not been established.

Hepatitis B virus infection is a major cause of acute and chronic hepatitis, cirrhosis, and primary hepatocellular carcinoma. An estimated 200,000 persons, primarily young adults, are infected in the US each year. Between 6 percent and 10 percent become carriers. It is estimated that 4,000 persons die from hepatitis B-related cirrhosis each year, and that more than 800 die from hepatitis B-related liver cancer. Homosexually active men are among the highest-risk groups; 10 to 20 percent per year develop this infection. Carriers and persons with acute infection have the highest concentrations of HBV in the blood and serous fluids; concentrations are lower in other body fluids, such as saliva and semen.

The Hepatitis B vaccine has been shown to be 90 to 95 percent effective in preventing infection among susceptible persons. After a series of three intramuscular doses of hepatitis B vaccine, over 90 percent of healthy adults develop protective antibody. The deltoid is the recommended site for vaccination; immunogenicity is significantly lower when injections are given in the buttock. Recent studies suggest that booster doses may be required after 5 years, as with other inactivated vaccines.[10] Use of the vaccine for pre-exposure prophylaxis in gay men is strongly recommended.

Two vaccines are presently available. The treatment steps used to produce the vaccine purified from human plasma have been shown to inactivate representatives of all classes of viruses found in human blood, including the causative agent of AIDS (HIV).[11] Studies in over 400,000 vaccine recipients have confirmed the safety of this vaccine. Commercial production of a genetically engineered vaccine produced from yeast has been licensed by the FDA. This vaccine is expected to be available in January 1987.

Sexual partners of HBV carriers or persons with acute HBV infection should receive a single dose (0.06 ml/kg) of Hepatitis B immune globulin. Additional doses of HBIG are unnecessary if the vaccine series is initiated at the same time. If vaccine is not given, a second dose of HBIG should be given if the index patient remains antigen positive for 3 months after detection.[12]

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Legal Aspects of Sexually Transmitted Diseases

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The legal issues presented by sexually transmitted diseases are not new. Yet the "newer" venereal epidemics, namely genital herpes and acquired immune deficiency syndrome (AIDS), have served to focus more attention than ever on the legal implications of sexually transmitted diseases. Both the patient and the public look to the legal system to define rights and remedies in areas of employment and military service, school attendance, insurance and health care, and continued sexual activity. Health care providers, likewise, must be mindful of situations that could subject them to liability either for negligently infecting a patient with a contagious disease or for failing to report a venereal disease, resulting in the subsequent infection of an innocent third party.

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As early as 1920, courts recognized that concealment and consequent transmission of a venereal disease could result in civil liability.[1] Many jurisdictions have imposed criminal sanctions for the knowing exposure of another to a venereal disease.[2] The Constitution reserves the right of individual states to enact and enforce laws to protect the health and welfare of their citizens. This authority, known as "police power," also allows states to invest local bodies, such as county Health Departments, with regulatory and enforcement authority.[3] Further justification for state action is provided by the *parens patriae* doctrine, expressing the role of state as guardian, under which states may take reasonable measures to protect citizens' welfare.

Reporting Requirements

Certain sexually transmitted diseases have been designated as reportable diseases and are considered to be of immediate public health importance. Physicians are required by statute to identify the disease and the patient and to submit this information to the local county Health Department office.[4] Reportable disease entities in Maryland include the familiar diagnosis of gonococcal infection and syphilis along with the recent addition of confirmed cases of AIDS.[5] Genital herpes is not required to be reported in Maryland.

The director of a medical laboratory in Maryland similarly is required to report designated diseases such as gonorrhea and syphilis within 48 hours of laboratory confirmation.[6] Laboratory directors may not compile reproducible lists of patients who yield positive results. Reports by physicians, health care institutions, and laboratories of contagious disease are confidential and not subject to public inspection. However, such reports may be disclosed to other state agencies, which will maintain confidentiality but which will require disclosure to prevent spread of infectious or contagious disease.[7] Physicians must notify firefighters and emergency rescue personnel of their contact with patients diagnosed with certain contagious diseases. AIDS and other sexually transmitted diseases are not among those listed, since AIDS currently is not believed to be transmitted by casual contact.[8]

Liability Issues

Courts may impose civil liability in appropriate cases against those who are responsible for the transmission of venereal disease. Most commonly, a lawsuit would seek to prove negligence. The injured party would have to prove that the defendant had a duty to the plaintiff and failed to conform to a reasonable standard of conduct. The current trend of case law recognizes a legal duty to warn another of an infectious venereal disease, for example, gonorrhea.[9] More recently, courts have found that failure to disclose the existence of genital herpes could be a basis for civil damages as well.[10] In this connection, it is important to note that the risk of disease transmission must be foreseeable. While foreseeability of disease transmission during a genital herpes recurrence would appear obvious, it may be somewhat more difficult to demonstrate foreseeability during a dormant period of the virus. Nonetheless, a full disclosure, allowing a potential partner's informed choice, would be the best means to avoid liability for venereal disease transmission.

Even more recently, the AIDS epidemic has spawned litigation that seeks damages for the negligent transmission of this disease and criminal prosecution for intentional infliction of it.[11] As the number of AIDS cases grows, it is anticipated that related negligence lawsuits will increase proportionately. As with other venereal diseases, the plaintiff will have to prove that the defendant knew of the contagious condition but concealed it from the plaintiff, thereby breaching a legal duty to warn a potential sexual partner. Where a plaintiff has admitted to multiple sexual contacts, considerable evidentiary problems will be encountered in trying to relate any single defendant to the transmission of the disease.

An alternative, but less likely, basis for liability could rest on the existence of an intentional tort.[12] Under this

theory, if it can be proved that the defendant intended to transmit the disease, he or she could be held civilly liable for the intentional tort of battery. Application of this theory to sexually transmitted diseases would not be new. Seventy years ago a court found a husband liable for battery when he infected his wife with syphilis.[13] The evidence indicated that he knew of his syphilitic condition, and the court inferred his intent from the fact that he infected his wife during sexual intercourse.

A third basis for liability could be the intentional tort of fraud. Here, one would have to prove that absence of sexually transmissible disease was fraudulently asserted, inducing a plaintiff to rely on the representation and causing injury in the form of the disease. The requirements here are more stringent than for negligence: the plaintiff must prove the misrepresentation about venereal disease was made with the intent to induce the plaintiff to engage in sexual activity. Nonetheless, if the requirements for fraud could be met, a court would be able to assess additional, punitive damages for the defendant's conduct.[14]

The law allows certain defenses to negligence suits, including the doctrine of assumption of the risk. For this to shield the defendant, it would have to be shown that the plaintiff knew of the defendant's venereal disease but engaged in sexual activity anyway, voluntarily assuming the risk of contracting the disease.

The state of Maryland allows the defense of contributory negligence. Under this theory, if a court found that the plaintiff also failed to conform to the standard of ordinary care and was guilty of contributory negligence, he or she would be barred from recovery.[15] By this reasoning, a court could find that a plaintiff was negligent in not inquiring about a potential sex partner's venereal disease status, barring that plaintiff from any recovery.

Finally, a defense that might be available to those who contract sexually transmitted disease from their spouse is the doctrine of interspousal tort immunity. At common law, a husband and wife were considered one and negligence actions between spouses were not permitted. Maryland, and 35 other states, have discarded the doctrine of interspousal immunity.[16] A husband or wife may sue a spouse for torts, which can include transmission of venereal disease.

Health Care Providers' Liability

Physicians are not immune from liability for infecting patients with contagious diseases. Legal repercussions for hepatitis transmission have been documented. An illustrative case involved five patients who developed acute hepatitis B infection within four months of undergoing major operations by the same obstetric-gynecologic surgeon. Investigation documented that all five patients had a hepatitis B subtype matching that of the surgeon and had no other identifiable risk factors for infection. Accordingly, the surgeon's privileges were restricted. He continued his surgical practice but was required to obtain written informed consent from patients, to use double gloves, and to employ appropriate surgical techniques to avoid self-injury. Seven months later an additional case of hepatitis B occurred—in a patient two months following a Cesarean section performed by the surgeon. This last case resulted in the surgeon's operating privileges being suspended. This was the fifth outbreak of nosocomial hepatitis B linked to an obstetric-gynecologic surgeon.[17]

There have been eight reported outbreaks of hepatitis B traced to dentists or oral surgeons. The number of clinical cases in these outbreaks ranges from 3 to 55, with several of the outbreaks showing a virulent form of the disease with a higher than expected mortality rate. Hemorrhagic procedures were more associated with transmission than were nonhemorrhagic procedures.[18]

The possibility of transmission of the HTLV-III virus via hemorrhagic surgical procedures exists and, therefore, health care workers who are known to have antibodies to the virus might be advised to refrain from participating in certain traditionally hemorrhagic surgical procedures. In addition to the personal liability that the health care provider would assume by continuing to operate in such circumstances, the hospital may be found liable for permitting a health care provider with antibodies to the HTLV-III agent to continue to operate. As AIDS incidence rises, it is only a matter of time before a suit is brought alleging that the plaintiff's infection resulted from contact with an infected health care provider. It will be argued that performance of surgery by a surgeon with a communicable disease places the patient in a position of added and unnecessary risk. While patients accept the risk of certain infections attendant to surgery, the risk of receiving an infection directly from a surgeon is not regarded as a normal risk incident to surgery. Furthermore, hospitals will be accused of negligence in allowing infected health care providers to continue to function, with ample precedent for this argument. Courts have long held hospitals liable for injuries caused by the illness of health care providers.[19]

The issue of AIDS virus transmission by blood transfusion is also important to health care providers. Maryland recently enacted a statute that declares that the distribution of blood or blood products by hospitals and

blood banks is a "service," rather than a "product."[20] The legal effect of this law is to exempt blood suppliers from "strict liability" where infected blood causes injury. "Strict liability" is a legal concept that imposes liability for providing a defective product, without regard to negligence or the ability to prevent or remove the defect. Thus, infected blood is not a "defective product," and some failure of the blood bank or center to perform its duties reasonably must be proved. However, if a patient can prove that the blood bank was negligent in the collection or testing of the blood prior to its use, then a negligence action could result in liability being imposed on the blood bank or hospital. This limitation on product liability mainly reflects a weighing of the risk of exposing the public to infected blood against the benefit of maintaining a ready blood supply.

Consent Issues Involving Treatment of Minors

In general, minors lack the legal capacity to consent to medical treatment. All states have enacted legislation to permit minors to consent to medical treatment in certain instances. Those general exceptions to the rule usually include emergencies, pregnancy related care, treatment for venereal disease, and treatment for alcohol and drug-related illness.[21] In Maryland, minors of any age may consent to treatment for venereal disease in the same way as adults.[22] In most states minors who are married, pregnant, living alone, or in the military service are considered emancipated and are permitted to consent to medical treatment for any medical condition. The minor receiving care for one of the listed conditions can expect to receive generally the same degree of confidential treatment that an adult expects from the medical community.[23]

Maryland does not impose a requirement that physicians notify the parents of minors who are treated for venereal disease. This serves to help preserve the confidentiality of the physician-patient relationship and at the same time encourages minors to seek necessary medical care. Additionally, it has been observed that parental notification requirements concerning venereal disease, drug addiction, or contraceptive use could critically injure the parent-child relationship.[24]

If a parent were to attempt to prevent a child from receiving treatment for a sexually transmitted disease, the state could intervene and order the required treatment. In life-or-death cases, the parent's claim of free exercise of religion has never prevented court-ordered state intervention, nor would the state fail to intervene in the case of a communicable disease.[25] The state can accomplish this intervention under either its police power to protect the welfare of the public from communicable disease or its *parens patriae* power, using child neglect statutes that require parents to provide necessaries for the support of the life, health, and comfort of the child.[26]

Parents may also be subject to criminal sanction. In a recent case, it was held that failure to provide a child with necessary medical care, regardless of his parents' religious beliefs, can constitute a basis for parental conviction of involuntary manslaughter.[27] Religious beliefs of the parents, then, are not a defense to criminal charges.[28]

Confidentiality

Under existing statutes and regulations in Maryland, as previously mentioned, a physician is required not only to report certain sexually transmitted diseases but also is under a duty to render necessary treatment and to instruct the patient regarding appropriate measures to prevent the spread of the disease.[29] Medical supervision should continue until such time as any period of observation for diagnosis has been completed, the disease has been reported, and the patient has received the necessary treatment.[30] The names of other parties with whom the patient has had potentially infective contact also should be ascertained by the treating physician and this information reported to the State health officer.[31]

Such detailed reporting inevitably raises concerns regarding patient confidentiality. Health regulations specify that all such reports and records are closed to public inspection and that the physician or State health officer may only divulge such information when necessary for the protection of the public health.[32] Nonetheless, such reporting and the use of widespread routine screening for exposure to the AIDS virus, such as undertaken by the military, unquestionably places patients at risk for discriminatory treatment. Actions taken to safeguard public health in the schools and in the work place are required to meet the Constitutional test of reasonableness or they will be barred as unlawful intrusions into citizens' personal liberty.

An illustration of the increasing concern about confidentiality is that California recently legislated criminal sanctions as penalties for those who break the confidentiality of HTLV-III test results.[33] The law makes disclosure of such test results a misdemeanor punishable by confinement of up to one year in jail and a fine of up to $1,000. For willful disclosure the fine is $5,000, and if economic, bodily, or psychological harm results, the fine can be up to $10,000. In addition, the patient whose confidential record was disclosed may sue for civil damages.

The issue of sexually transmitted diseases will continue to test the flexibility of our legal system. Relevant

laws and regulations will continue to undergo amendment as legislators and courts struggle to balance patients' rights against the public welfare, and the last chapter in this controversy has not yet been written.

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1. *Crowell v. Crowell*, 180 N.C. 516, 105 S.E. 206 (1920).
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3. *Jacobson v. Massachusetts*, 197 U.S. 11 (1905).
4. Md. Ann Code, §18-201 (1982).
5. Code of Maryland Regulations (COMAR), Department of Health and Mental Hygiene, Title 10.06.01.02 (Supp. 1985).
6. Md. Ann. Code §18-205 (1982).
7. Md. Ann. Code, §18-201 (Ch. 500, Laws 1986).
8. Md. Ann. Code, §18-213 (Ch. 763, Laws 1986).
9. *Duke v. Housen*, 589 P.2d 334 (Wyo. 1979).
10. *Kathleen K. v. Robert B.*, 150 Cal. App. 3d 992, 198 Cal. Rptr. 273 (1984). See also Long v. Adams, 175 Ga. App. 538, 333 S.E.2d 852 (1985) (unmarried person who contracts genital herpes from his unmarried sexual partner can sue for damages under the theory of negligence).
11. In Michigan and California men with AIDS spat or bit police and were charged with felonious assault. *The National Law Journal*, February 3, 1986, p. 3, col. 1.
12. A tort is a civil wrong for which payment of damages is the remedy. Torts are private offenses; in comparison, criminal acts are offenses against the public and for which the state imposes criminal penalties.
13. *State v. Lankford*, 29 Del. 594, 102 A. 63 (1917).
14. Comment, You Wouldn't Give Me Anything, Would You?—Tort Liability for Genital Herpes, 20 *Cal W L Rev* 60, 78 (1983).
15. *Moran v. Faberge, Inc.*, 273 Md. 538, 332 A.2d 11 (1975).
16. *Boblitz v. Boblitz*, 296 Md. 242, 262 A.2d 506 (1983).
17. Lettau, *et al.* Transmission of Hepatitis B with Resultant Restriction of Surgical Practice, 255 *JAMA* 934 (1986).
18. Id.
19. *Taaje v. St. Olaf Hospital*, 199 Minn. 113, 271 N.W. 109 (1937) (hospital held liable for nursing supervisor's failure to evaluate a nurse's contagious condition); *Kapuschinsky v. United States*, 248 Fed. Supp. 732 (D. S. C. 1966) (liability established where nurse transmitted "staph" infection to newborn).
20. Md. Ann. Code, §18-402 (Ch. 259, Laws 1986).
21. Cohn, Minor's Right to Consent to Medical Care, *Medical Trial Technique Q*, Winter 1985, 286.
22. Md. Ann. Code §20-102 (1982). This same provision provides that a physician may, with or without the consent of a minor, and even over his or her objection, give the parent information about the minor's treatment.
23. This concept has led some to propose model legislation to clarify the issue. For instance, Canon 8 of the Pediatric Bill of Rights, adopted by the Board of Trustees of the National Association of Children's Hospitals, provides that "any person, regardless of age, who is of sufficient intelligence to appreciate the nature and consequences of the proposed care, and if such medical care is for his own benefit, may effectively consent to such medical care in doctor-patient confidentiality."
24. Wright, A Minor's Right to Consent to Medical Care, 25 *Howard L J* 525, 542 (1982).
25. *Jehovah's Witnesses v. King County Hospital*, 278 F. Supp. 488 (W.D. Wash. 1967).
26. *Jacobson v. Massachusetts*, 197 U.S. 11 (1905).
27. *Walker v. Superior Court*, 222 Cal. Rptr. 87 (1986).
28. *Mitchell v. Davis*, 205 S.W.2d 812 (Tex. Civ. App. 1947).
29. COMAR, Department of Health and Mental Hygiene, Title 10.06.01.22 (supp. 1985).
30. Id.
31. Id.
32. Id. See Md. Ann. Code §4-301 (Ch. 307, Laws 1986) where disclosure of information in medical records under circumstances involving organ donation is permitted.
33. Cal. Ann. Code §199.21 (West Supp. 1986).

Medicolegal Hotline
for any emergency

January	***Arthur Kaufman MD***	***301-984-6180***
	William H. Engelman, Esq.	***301-539-6797***
February	***Rafael C. Haciski MD***	***301-235-5255***
	Broughton Earnest, Esq.	***301-822-4888***
March	***Alfred L. Lapin MD***	***301-345-6910***
	Max R. Israelson, Esq.	***301-539-6633***



John W. Southard MD, MPH (right) received an award for his outstanding contribution to and support of disease prevention and health promotion programs from **Albert M. Antlitz MD**, Chairman, Board of Directors of the Center for Health Education, Inc. The award from the Center was presented at Med-Chi's September 1986 Semiannual House of Delegates Meeting. Dr. Southard is Assistant Director, Chronic Disease Prevention, Department of Health and Mental Hygiene of the State of Maryland.

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AMERICAN MEDICAL WRITERS ASSOCIATION

The Center for Health Education, Inc. is a joint venture of the Medical & Chirurgical Faculty of the State of Maryland (Med-Chi, the State Medical Society) and Blue Cross and Blue Shield of Maryland.

Medical and Chirurgical Faculty of the State of Maryland

Blue Cross Blue Shield

of Maryland

STD Community Resources

GARY W. WUNDERLICH and SCOTT H. STAMFORD

The following is a resource list for AIDS and STD information, referral, counseling, and clinical services. We have organized it geographically to facilitate referral. (Wunderlich is a Health Educator and Stamford is an AIDS Coordinator with the State of Maryland, Department of Mental Health and Hygiene.)

National

STD

Centers for Disease Control
(404)329-1819
VD National Hotline
1-800-227-8922
Herpes Resource Center
(415)320-7710

AIDS

Centers for Disease Control
1-800-447-AIDS
National Institute of Allergies and Infectious Diseases
(301)496-5717
Public Health Service
1-800-342-AIDS
AIDS Action Council
(202)547-3101
American Association of Physicians for Human Rights
(415)558-9353 or (415)673-3189
National Association of People with AIDS
(202)483-7979
Lambda Legal Defense and Education Fund
(212)944-9488
National Gay Task Force
(212)219-8180
National Lesbian and Gay Health Foundation
(202)797-3708

State

STD

Department of Health and Mental Hygiene
Consultation (301)225-6688
Surveillance (301)225-6688
Laboratory Services (301)225-6100

AIDS

Department of Health and Mental Hygiene
Consultation (301)225-6707
Surveillance (301)225-6707
Laboratory Services (301)225-6100
State-Designated AIDS Information and Referral Hotline Operated by HERO
Baltimore HOTLINE (301)945-AIDS
Statewide HOTLINE 1-800-638-6252
Department of Human Resources
Social Services & Project HOME (301)576-5277
Health Education and Resource Organization (HERO)
Office (301)685-1180

Local

Baltimore City

STD

Baltimore City Health Department
Consultation (301)396-4448
Surveillance (301)396-4448
Clinical Services
(301)396-0176—Druid Disease Control Center
(301)396-8111—Eastern Health District
Chase-Brexton Clinic (301)837-2050

AIDS

Baltimore City Health Department
Consultation (301)396-4444 or 1927
Surveillance (301)396-4444 or 1927
Medical Care
Hemophilia Treatment Center (301)368-6460 or 7756; St. Agnes Hospital
Special High Risk Child Clinic (301)528-2533
University of Maryland Hospital
Pediatric AIDS Care & Evaluation Clinic
(301)528-6911
First AIDS Service (301)955-3150 or 3019
Johns Hopkins Hospital
Pediatric HIV Infection (301)955-5201
Johns Hopkins Hospital
Pediatric Immunology/High Risk Maternity
(301)528-6911; University of Maryland Hospital
Chase-Brexton Clinic (301)837-2000
Counseling and Testing Sites (CTS)
American Red Cross (301)467-9905
Clinic of the Gay & Lesbian Community Center of Baltimore (301)837-2050
Eastern Health District (301)396-1927 or 1928

Local Health Departments

Allegany County

STD/AIDS

Consultation/STD Clinical Services/CTS
(301)777-5666

Anne Arundel County

STD/AIDS

Consultation/STD Clinical Services/CTS
(301)224-7176 or (301)224-7382

Baltimore County

STD
Consultation/STD Clinical Services
(301)494-2713
AIDS
CTS (301)494-2729

Calvert County

STD/AIDS
Consultation/STD Clinical Services/CTS
(301)535-0128

Caroline County

STD/AIDS
Consultation/STD Clinical Services/CTS
(301)479-0556

Cecil County

STD/AIDS
Consultation/STD Clinical Services/CTS
(301)398-5700

Charles County

STD/AIDS
Consultation/STD Clinical Services/CTS
(301)934-9577

Dorchester County

STD/AIDS
Consultation/STD Clinical Services/CTS
(301)228-3223

Frederick County

STD/AIDS
Consultation/STD Clinical Services/CTS
(301)694-1738

Garrett County

STD/AIDS
Consultation/STD Clinical Services/CTS
(301)334-8111

Harford County

STD
Consultation/Clinical Services
(301)838-1500 or (301)272-5515
AIDS
CTS—(301)272-5515

Howard County

STD/AIDS
Consultation/STD Clinical Services/CTS
(301)992-2333

Kent County

STD/AIDS
Consultation/STD Clinical Services/CTS
(301)778-1350

Montgomery County

STD
Consultation/Clinical Services
(301)593-8507
AIDS
CTS—(301)593-8507
Information—HERO (301)762-3385

Prince George's County

STD
Consultation/Clinical Services
(301)386-0116
AIDS
CTS—(301)386-0110
Information—HERO (301)386-4370

Queen Anne's County

STD/AIDS
Consultation/STD Clinical Services/CTS
(301)758-0720

Somerset County

STD/AIDS
Consultation/STD Clinical Services/CTS
(301)651-0822

St. Mary's County

STD/AIDS
Consultation/STD Clinical Services/CTS
(301)475-8921

Talbot County

STD/AIDS
Consultation/STD Clinical Services/CTS
(301)822-2292

Washington County

STD
Consultation/Clinical Services
(301)791-3231
AIDS
CTS—(301)791-3231
Information—HERO (301)791-3200

Wicomico County

STD/AIDS
Consultation/STD Clinical Services/CTS
(301)749-1244

Worcester County

STD/AIDS
Consultation/STD Clinical Services/CTS
(301)632-1100 or (301)289-4044

Miscellaneous Meetings

Two-year Child Therapists Course, **Psychoanalytic Principles as Applied to the Psychotherapy of Children,** sponsored by the DC Extension Division of the Baltimore-District of Columbia Institute for Psychoanalysis. Classes meet weekly in Washington on Tuesday evenings. CME approved Cat I. Info: write the Institute at 4545 42nd St. NW, Washington, DC 20016 (202-362-0331 or 362-2796).

Jan 24 Eighth Annual Interdisciplinary Conference on Children and Adolescents: Forgotten Children: A New Frontier for Prevention (snow date Jan 31), 9 a.m.–12:30 p.m, Ford Building of the Sheppard and Enoch Pratt Hospital, Towson. Regis: $15, $5 for full-time students. Info: 301-484-7162.

Jan 30 Gender Issues in Family Therapy and Family Life, sponsored by the Philadelphia Child Guidance Clinic Family Training Center, Philadelphia, PA. Fee: before 12/30, $65, thereafter $75; students $50. Info: K. Brennan, 215-243-2773.

Feb 19–20 Madness, Chaos, and Violence: Challenges to the Therapist. Part II Anorexia/ Violence, sponsored by the Philadelphia Child Guidance Clinic, Family Therapy Training Center, Philadelphia, PA. Fee: $175 both sessions, $125 each session; students $125 both sessions, $75 each session. Info: K. Brennan, 215-243-2773.

Feb 27–Mar 1 From Research to Relevance, Annual Meeting and CME, sponsored by VA Chapter, American Academy of Pediatrics and VA Pediatric Society. 15 AMA and 12 PREP credits. Info: VA Chapter, AAP, 1001 E. Main St. Ste 301, Richmond, VA 23219 (804-643-8130).

Mar 26 Review of the Genetic Influence on the Rheumatic Diseases, Maryland Society for the Rheumatic Diseases. Meeting at the Johns Hopkins Club. Info and reservations: K. Krug, 301-366-0923.

Mar 28 MAFP Mini Conference—Cardiovascular Update for Family Physicians, Tidewater Inn East. Info: John B. Umhau, Jr., MD, 1204 Maryland Ave., Baltimore, MD 21201 (301-659-0640).

Apr 3–5 Ophthalmologic Plastic Surgery, Orbital Disease, and Neuro-ophthalmology, Medical College of Virginia CME Activity, Williamsburg Hospitality House. Fee $315. Info: K. Parrott, 804-786-0494.

Apr 9–12 Annual Meeting, The Virginia Society of Otolaryngology-HNS, Tides Inn, Irvington, VA. Info: D. Strawderman, 4205 Dover Rd., Richmond, VA 23221 (804-353-2721).

Apr 10–12 Fifth Annual MCV Symposium: New Trends in Anesthesia, Medical College of Virginia CME Activity. Williamsburg Hilton. Fee: $275. Info: K. Martin, 804-786-0494.

Apr 10–12 Twenty-second Annual Pediatric Springfest, Medical College of Virginia CME Activity, Williamsburg Hospitality House. Fee: $250. Info: K. Martin, 804-786-0494.

Apr 23–25 Twenty-third Annual Postgraduate Course in Radiology: The Chest, Medical College of Virginia CME Activity, Richmond Marriott. Fee: $325. Info: K. Parrott, 804-786-0494.

Apr 24–26 Ninth Annual Conference on Emergency Medicine for the Primary Care Physician, Medical College of Virginia CME Activity, Fort Magruder Inn and Conference Center. Fee: $295. Info: K. Martin, 804-786-0494.

April 24–26 Seventh Annual Clinical Concerns in Primary Care: Office Cardiology, Medical College of Virginia CME Activity, Williamsburg Hospitality House. Fee: $295. Info: K. Martin, 804-786-0494.

May 8–10 Sixth Annual MCV Cardiology Conference, Medical College of Virginia CME Activity, Williamsburg Hospitality House. Fee: $325. Info: K. Martin, 804-786-0494.

May 13–17 MAFP Annual Meeting and Scientific Sessions, Sheraton Fountainebleau Inn & Spa, Ocean City. Up to 30.5 AMA Cat I credits and up to 30.5 AAFP prescribed credits. Info: R. Bonsack MD, 301-659-0640.

May 14–17 Annual Meeting, Virginia Society of Ophthalmology, Sheraton Tysons Corner. Info: D. Strawderman, 4205 Dover Rd., Richmond, VA 23221 (804-353-2721).

May 18–19 Fourteenth Annual Hans Berger Day and EEG Symposium, Medical College of Virginia CME Activity, Baruch Auditorium, Egyptian Bldg., Medical College of Virginia Campus, Richmond, VA. Fee: $250. Info: K. Martin, 804-786-8494.

May 21 Update of Epidemiological Studies in Autoimmune Diseases, Maryland Society for the Rheumatic Diseases. Meeting at the Johns Hopkins Club. Info and reservations: K. Krug, 301-366-0923.

May 23–25 Gynecologic Urology and Pelvic Surgery, Medical College of Virginia CME Activity, Williamsburg Hospitality House. Fee: $260. Info: K. Martin, 804-786-0494.

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The Johns Hopkins Medical Institutions

All courses at the Turner Auditorium Building unless otherwise indicated. Sponsored Continued Education Activities for 1986–87. Info: Office of Countinuing Education, 720 Rutland Ave., Turner Auditorium, Baltimore, MD 21205 (301-955-5880).

Feb 19–20 Sex Offenders: Criminals or Patients? Fee: $200 before 1–31, $225 thereafter; 13 AMA Cat I credits, 1.3 CEU. Info: C. Sentman, 301-955-6085.

Mar 9–11 Spectrum of Developmental Disabilities IX: Minus 0–30 Months: Clinical and Research Issues. Fee: $300; 20 AMA Cat I credits; 20 Cat A credits for psychologists; 2.0 CEU. Info: C. Kearney, 301-955-3168.

Mar 12–13 Positron Emission Tomography and the Chemistry of Mental Illness. Fee: $275,

residents and fellows $175; 15 AMA Cat I credits. Info: P. Macedonia, 301-955-6085 or J. Buchanan, 301-955-8582.

Mar 21–22 Hemodynamic Monitoring/Patient Care and Pulmonary Artery Catheterization. Fee: $360; 14 AMA Cat I credits. Info: J. Ryan, 301-955-6046.

Mar 23–24 Non-Occupational Exposure to Asbestos in Schools and Other Buildings: Risk Assessment and Management. Fee: $350, Johns Hopkins Health Associates $275; 12.5 AMA Cat I credits, 1.25 CEU, 2 ABIH. Info: J. Corn, 301-955-2609.

Mar 30–Apr 1 Tutorials in Laser Angioplasty and Interventional Radiology. Fee: $400 physicians, $200 residents, nurses, technicians; 25 AMA Cat I credits, 24 ECE credits by ASRT. Info: C. Kearney, 301-955-3168.

Apr 6–11 Pediatric Trends 1987. Fee: $500, residents and fellows $350; 45 AMA Cat I and 45 PREP American Academy of Pediatrics credits. Info: C. Sentman, 301-955-6085 or E.M. Sills MD, Park 207, Johns Hopkins Hospital, 600 N. Wolfe St., Baltimore, MD 21205.

Apr 11 Current Concepts in Thyroid Disease. Fee: $125; 8 AMA Cat I credits. Info: D. Heydinger, 301-955-6046.

May 22 Seventeenth Anniversary Meeting of the Retinal Vascular Center—Clinical Trials and the Practice of Ophthalmology. Fee $190, residents and fellows $100. Info: D. Heydinger 301-955-6046.

Johns Hopkins Medical Grand Rounds: audiocassettes, slides, and booklet. 30 topics and 40 AMA Cat I credits/year. Contact 301-955-3988, Office of Continuing Education, 720 Rutland Ave., Baltimore, MD 21205.

Ophthalmic Electrophysiology Technician Training Course (ongoing 1-week course by appointment), The Wilmer Eye Institute, Baltimore. Info: C.M. Kearney.

The Department of Radiology and Radiological Science offers several courses in abdominal and obstetrical ultrasound: Courses scheduled 1/12/87–12/7/87. Info: J. Mosmiller, 301-955-8450.

Basic Practicum Jan 12–16, May 11–15, Nov 16–20. Fee: $460; 40 AMA Cat I credits.

Advanced Obstetrics & Gynecology May 8–10. Fee: $325; 24 AMA Cat I credits.

Advanced Practicum in Ultrasound Dec 7–11. Fee: $460; 40 AMA Cat I credits.

Visiting Physicians is offered throughout the year, by appointment only. Fee: $460; 40 AMA Cat I credits.

Diagnostic Cytopathology for Pathologists, 1987 Postgraduate Institute: February to May 1987, subspecialty residency in Clinical Cytopathology, compressed into two courses, both of which must be taken:

Feb–Apr Home Study Course A—personal reading and microscopic study at own laboratory in preparation for Course B.

Apr 27–May 8 In-residence Course B—lecture series, laboratory study, and clinical experience at the Johns Hopkins Medical Institutions, Baltimore, MD, USA.

Designed solely for pathologists who are certified (or qualified for certification) by the American Board of Pathology or its international equivalent, this institute is an intensive refresher in all aspects of Clinical Cytopathology with time devoted to newer developments and techniques, special problems, and recent applications including *immunodiagnosis* and *needle* aspiration. Loan slide set with texts (Course A) will be sent each participant within the US and Canada for home study during Feb through Apr before Course B in Baltimore on April 27 to May 8. Participants outside the US and Canada must make arrangements to study Course A before Course B. *The entire course is given in English.*

Application and completed preregistration is advised ASAP: preregistration must be completed before March 27, 1987, unless by special arrangement. Info: John K. Frost MD, 604 Pathology Bldg, The Johns Hopkins Hospital, Baltimore, MD 21205, USA.

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University of Maryland School of Medicine

CME Courses: For each course additional information may be obtained by contacting Program of Continuing Education, University of Maryland School of Medicine, Room 300, MSTF, 10 South Pine St., Baltimore, MD 21201 (301-528-3956).

Mar 19–21 Third Annual University of Maryland Contact Lens Symposium, The Omni International Hotel, Baltimore. Fee: $160 before Mar 1; $175 thereafter; 12 AMA Cat I credits.

Mar 26–27 Third National Traumatic Brain Injury Symposium, sponsored by the Speech-Communication Disorders Program, MIEMSS, University of Maryland Medical System. Info: R. Schwartz, 301-528-6101.

Apr 3–4 Symposium on Urologic Cancer, Omni International Hotel, Baltimore. Fee and credit: TBA.

Visiting Professor Programs—Directory of speakers and topics available for area hospitals and other health care organizations. An administrative fee is charged. Info: 301-528-3956.

Visiting Practitioner Preceptorships—Opportunity for physicians to participate in clinical situations in the University of Maryland Hospital. Requires approval from clinical department heads. Hour-for-hour AMA Cat I credits.

Sep thru Jun—Departmental Rounds and Conferences—Hands-on opportunity for practicing physicians, including lectures and discussions, produced by clinical departments. Brochure available. Hour-for-hour AMA Cat I credits.

Clinical Quiz

This the the *MARYLAND MEDICAL JOURNAL's* first clinical quiz. You may receive two (2) Category I continuing medical education credits by completing and mailing this quiz to the Center for Health Education, Inc. All questions are based on articles within this issue. Please use the mail-in answer card. **Each question has only ONE correct answer.**

Prevention and Sexually Transmitted Diseases

1. An issue about which physicians have tended to be lax in counseling their patients who have sexually transmitted diseases is:
   A. information on the disease and its sequelae
   B. the importance of compliance with the therapeutic regimen
   C. how to avoid re-infection
   D. the importance of returning for tests of cure
2. Contacts of patients are rigorously pursued by health departments when a patient has anyone of the following sexualy transmitted diseases EXCEPT:
   A. primary syphilis
   B. penicillinase-producing *Neisseria gonorrhoeae*
   C. penicillin-sensitive *Neisseria gonorrhoeae*
   D. pelvic inflammatory disease

Update on HIV Infection: Neurological Aspects

3. The major neurological manifestation of HIV infection affecting more than half of AIDS patients is:
   A. AIDS-related dementia
   B. cerebral toxoplasmosis
   C. acute atypical meningitis
   D. AIDS-related encephalitis
4. Clinical improvement of the symptoms of cerebral toxoplasmosis can be achieved if treated promptly with:
   A. steroids
   B. acyclovir
   C. immune globulin
   D. pyrimethamine and sulfadiazine

Update on HIV Infection: Psychiatric Aspects

5. The most common feature of major depression in patients with HIV infection, as well as the most prominent early clinical symptom of dementia is:
   A. professed anxiety and stress related to fears about current and future health, social contacts, etc.
   B. apathy toward personal and professional responsibilities
   C. delirium including hallucinations and delusions
   D. none of the above
6. Mental status changes in HIV-infected patients develop slowly, progressively, and somewhat predictably as the disease progresses.
   A. true
   B. false

Pediatric AIDS

7. A key problem with pediatric AIDS that is different from adult AIDS is that:
   A. Kaposi's sarcoma is a common manifestation
   B. mucocutaneous fungal infections are common
   C. Pneumocystis carinii pneumonia occurs rarely
   D. bacterial infections recur frequently
8. An important intervention that can be used to limit morbidity in pediatric AIDS is:
   A. use of intravenous gamma globulin
   B. use of vitamin B_{12}
   C. standard well-baby vaccination series including live oral polio vaccine
   D. suppressive antibiotic therapy

HIV Antibody Testing

9. Counseling of seronegative individuals who have engaged in high-risk behaviors during the 12 weeks prior to testing should include the recommendation that they:
   A. need not be retested because a negative ELISA is 98 to 99 percent specific
   B. need not be retested unless physical indications of HIV infection appear
   C. should be retested in 3 months
   D. should have confirmatory testing, usually with a Western Blot
10. For a woman of childbearing age, all of the following is true EXCEPT that she should:
    A. have routine testing for HIV antibody in the first trimester
    B. be encouraged to be tested for HIV antibody if she is in a risk group or is a sexual partner of someone in a risk group
    C. be counseled to defer pregnancy if she is a sexual partner of a male seropositive
    D. be counseled to defer pregnancy if she is seropositive

Counseling and HIV: Test Results and Risk Reduction

11. Physicians should include questions about sexual practices in their medical histories for:
    A. their patients who are gay
    B. all of their patients, including those who are married
    C. single men and women
    D. all patients who have been previously diagnosed with an STD
12. During posttest counseling of seropositives, the physician should investigate the patient's:
    A. emotional response to the news of HIV infection
    B. attributions for exposure to the virus
    C. feelings about informing previous and future sexual partners
    D. all of the above

The Governor's Task Force on AIDS

13. The Governor's Task Force on AIDS has made policy recommendations for combating AIDS that include one of the following:
    A. support of legislation that would mandate reporting of all persons testing positive for HIV antibodies
    B. the recommendation that physicians should advise sexual partners of HIV-infected patients if those patients cannot or will not do so themselves
    C. support of dentists and morticians who decline to serve AIDS patients
    D. the recommendation that it is not necessary to have trained counselors at testing sites

Gonococcal Infections: A Continuing Diagnostic and Therapeutic Challenge

14. Gonococcal infection can be reliably and quickly diagnosed using:
    A. Gram stain confirmed by culture on selective media

Clinical Quiz

January 1987

Please print, type, or affix mailing label.

Name: _____

Street: _____

City/State/Zip: _____

MMJ Clinical Quiz Answer Card

1.	A	B	C	D		11.	A	B	C	D		21.	A	B	C	D	
2.	A	B	C	D		12.	A	B	C	D		22.	A	B	C	D	
3.	A	B	C	D		13.	A	B	C	D		23.	A	B	C	D	
4.	A	B	C	D		14.	A	B	C	D		24.	A	B	C	D	E
5.	A	B	C	D		15.	A	B	C	D		25.	A	B	C	D	
6.	A	B				16.	A	B	C	D		26.	A	B	C	D	
7.	A	B				17.	A	B	C	D		27.	A	B	C	D	
8.	A	B	C	D		18.	A	B	C	D		28.	A	B	C	D	
9.	A	B	C	D		19.	A	B	C	D		29.	A	B	C	D	E
10.	A	B	C	D		20.	A	B	C	D		30.	A	B	C	D	

Would you be interested in seeing persons referred who are sero positive for anti HIV?
__ Yes __ No

Would you be willing to see people who are symptomatic and at high risk for AIDS?
__ Yes __ No

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1204 Maryland Avenue
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B. clinical signs and symptoms alone
C. nonculture diagnostic test such as enzyme immunoassay
D. dark-field microscopy

15. The recommended treatment regimen for gonococcal infections includes both a single-dose treatment and a course of tetracycline because:
A. of the relatively high probability of chlamydial co-infection in patients with gonorrhea
B. of the development of penicillinase-producing *Neisseria gonorrhoeae* (PPNG)
C. of the development of chromosomally mediated resistant *Neisseria gonorrhoeae*
D. it is effective at all potential mucosal sites of infection, is effective in a single dose, is safe and convenient, and is relatively inexpensive to administer

Chlamydial Infections

16. The clinician can use all of the following methods to determine the presence of chlamydia with acceptable accuracy EXCEPT:
A. fluorescent antibody assay
B. enzyme assay
C. pap smear
D. culture

17. The statement that best describes the prevalence of chlamydial infections is that chlamydia infections are:
A. less prevalent than other STDs but they are increasing rapidly
B. three times more prevalent than gonorrhea in most populations
C. most prevalent in infants and in aging populations
D. mostly found in females

Pelvic Inflammatory Disease and Infertility

18. An important problem with PID is recurrence. The reasons for this include all of the following EXCEPT:
A. impaired local host defenses
B. unaltered behavior patterns
C. resistance to the usual antibiotic treatment
D. incomplete contact tracing and treatment

19. Chlamydial PID:
A. is often associated with fever and leukocytosis
B. is usually associated with abnormal discharge and tenderness on bimanual exam
C. is often asymptomatic or associated with mild uterine or adnexal tenderness or right upper quadrant pain
D. does not usually lead to infertility

Viral STDs—Herpes Simplex and Human Papillomavirus

20. Pregnant women with a history of genital herpes:
A. should not be treated with acyclovir but should be cultured weekly during the last month of pregnancy
B. should be treated with acyclovir to prevent transmission of genital herpes to the neonate
C. are not likely to have an episode of HSV-2 infection because the hormones associated with pregnancy suppress the virus
D. should be given the live virus HSV vaccine

21. The diagnosis of ano-genital HPV:
A. cannot be made without doing a cell culture
B. cannot be made without a biopsy and histologic examination of the tissue
C. is not complicated by the possibility of other infectious conditions because of the unique appearance of condyloma acuminatum
D. may be acceptably based on history and macroscopic appearance of the lesion

Sexually Transmitted Disease and the Gay Male

22. Complaints of rectal pain, discharge, mucous coating on stools, and/or rectal bleeding in a patient who practices anal intercourse should prompt an investigation that includes all the following EXCEPT:
A. anoscopy
B. dark-field examination of rectal specimens
C. rectal Gram stain
D. rectal culture for GC
E. syphilis serology

23. Use of Hepatitis-B vaccine for pre-exposure prophylaxis in gay men:
A. is strongly recommended due to its efficacy in preventing infection (90 to 95 percent effective) and safety record (studies of over 400,000 recipients)
B. has not been shown to be effective although its safety has been confirmed
C. is not recommended because, although effective, its safety is in question
D. can be administered effectively in one dose, without requiring booster doses

STD Patient Education and Resources

24. To protect the health of others, a patient with a sexually transmitted disease should be encouraged to do all of the following EXCEPT:
A. take medication as prescribed and return for test of cure
B. refer sexual partners for medical care
C. accept available vaccines for sexually transmitted diseases
D. modify behavior to reduce risk of future infection

Legal Aspects of Sexually Transmitted Diseases

25. Maryland physicians are responsible for reporting cases of the following STDs EXCEPT:
A. AIDS
B. lymphogranuloma venereum
C. gonorrhea and syphilis
D. HIV infection

AIDS—Epidemiologic and Clinical Aspects

26. HIV can be transmitted through all of the following routes EXCEPT:
A. sexual transmission, especially receptive anal intercourse
B. needles, by IV drug users and through medical/paramedical reuse of inadequately sterilized needles and syringes
C. fecal-oral contamination
D. blood and blood products
E. HIV-infected mothers to the fetus

***MMJ* January 1987: Sexually Transmitted Diseases: New Fronts in an Old Battle**

27. This journal presented new and useful information to me.
A. strongly agree
B. agree
C. disagree
D. strongly disagree

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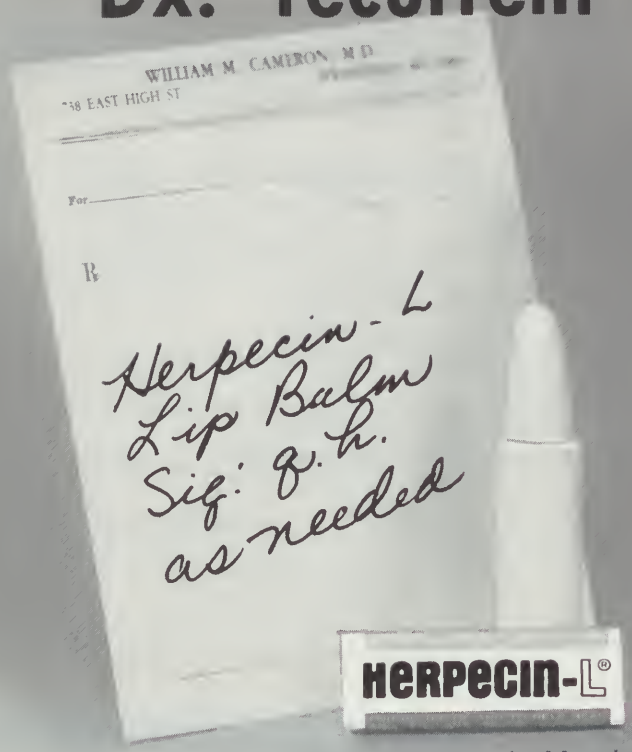
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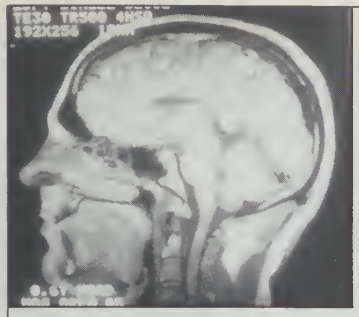
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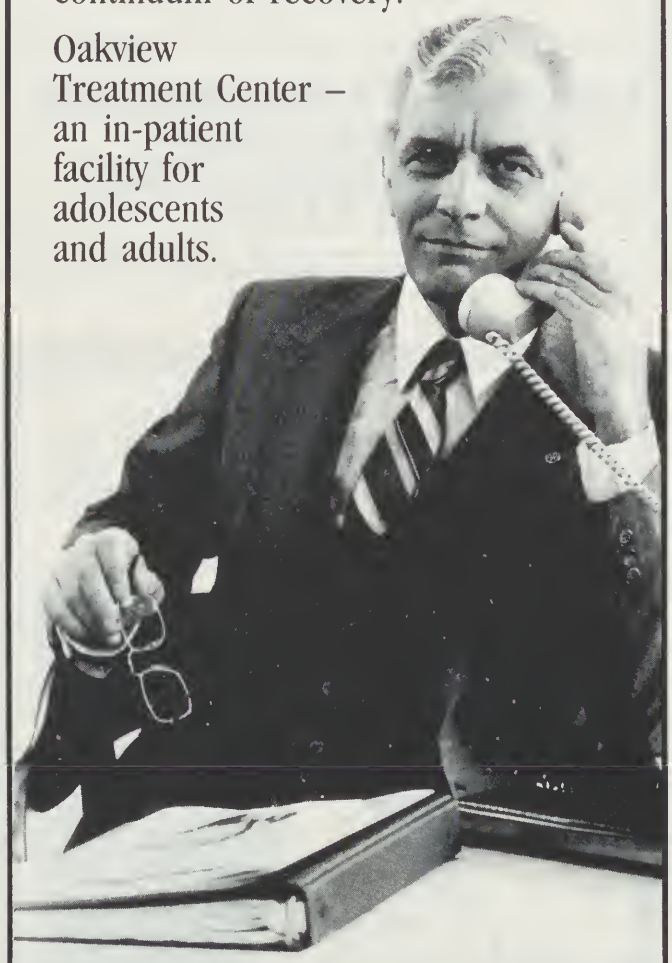
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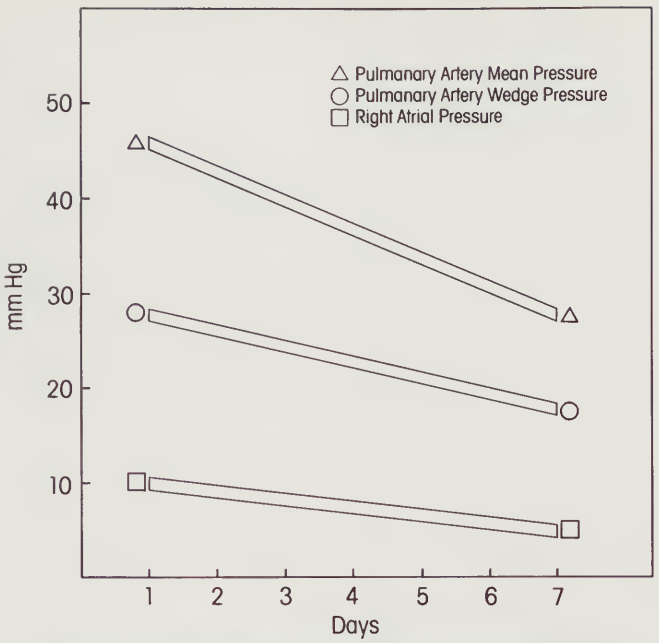
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Prevention of hypokalemia requires particular attention in patients receiving digitalis and diuretics for congestive heart failure, hepatic cirrhosis and ascites, states of aldosterone excess with normal renal function, potassium-losing nephropathy, certain diarrheal states, or other states where hypokalemia is thought to represent particular added risks to the patients.
In patients with hepatic cirrhosis and ascites, sudden alterations of electrolyte balance may precipitate hepatic encephalopathy and coma. Treatment in such patients is best initiated in the hospital with small doses and careful monitoring of the patient's clinical status and electrolyte balance. Supplemental potassium and/or spironolactone may prevent hypokalemia and metabolic alkalosis in these patients.
In cats, dogs and guinea pigs, Bumex has been shown to produce ototoxicity. Since Bumex is about 40 to 60 times as potent as furosemide, it is anticipated that blood levels necessary to produce ototoxicity will rarely be achieved. The potential for ototaxicity increases with intravenous therapy, especially at high doses.
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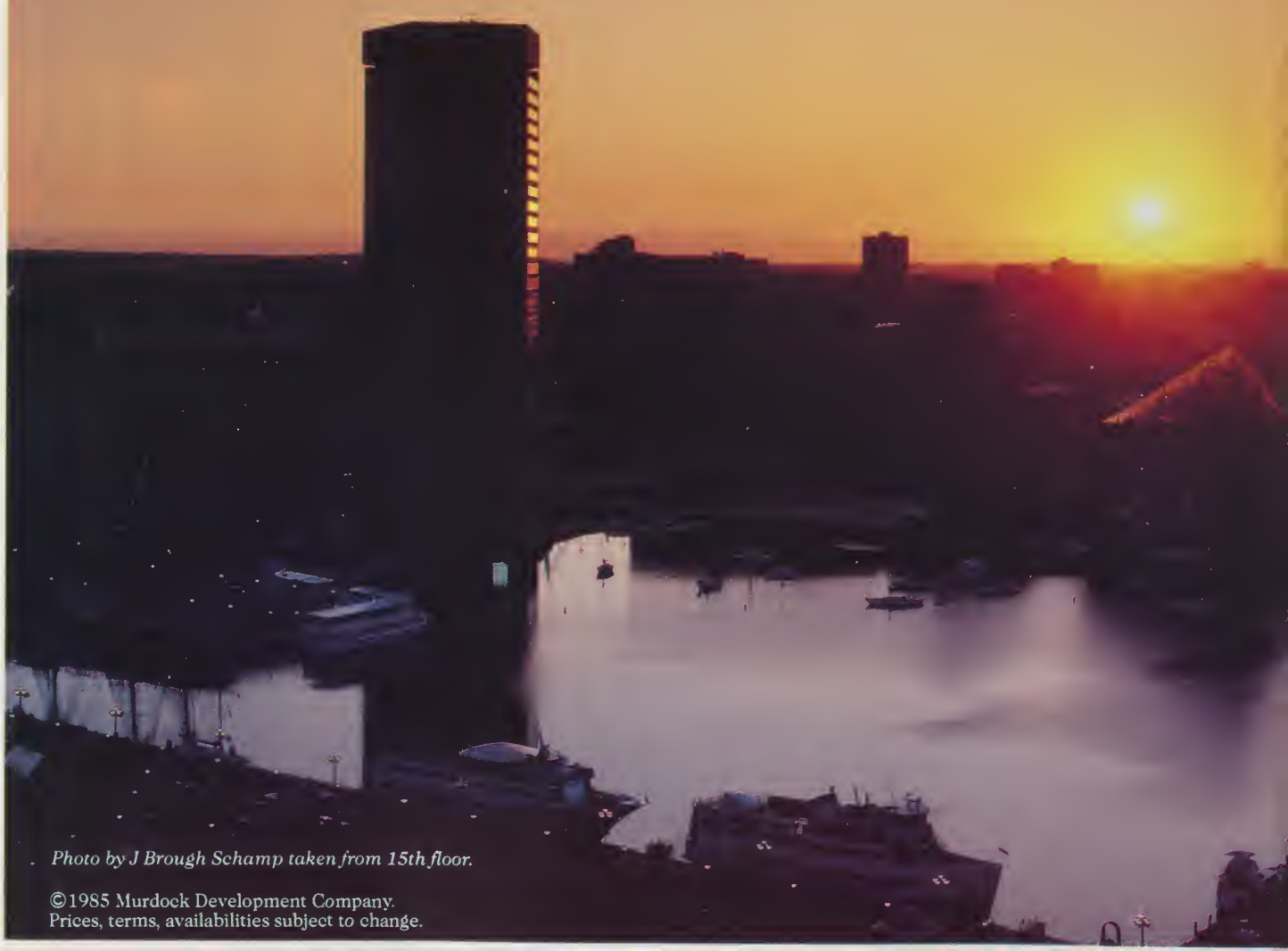


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On the cover: A portrait of Maurice C. Pincoffs MD (1886–1960), painted in 1957 by Stanisloy Remsky, hangs in the entry of Davidge Hall on the northeast corner of Lombard and Greene Streets, Baltimore (photo by Jeff D. Goldman). Article begins on page 141.

The views in this publication are those of the authors and do not necessarily reflect the opinion of the Medical and Chirurgical Faculty of the State of Maryland.

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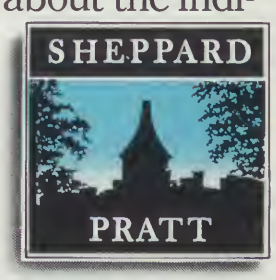
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Letters to the Editor

Postural Myoneuralgia

In the October *Maryland Medical Journal* there is an interesting article on "Team Management of Patients with Diffuse Upper Extremity Complaints."

The thoracic outlet syndrome is mentioned frequently. I would like to point out that a better term for this is "postural myoneuralgia," which has been reported most recently in the *Journal of International Angiology*, April-June 1984.

Postural myoneuralgia includes the following conditions:

1. acroparesthesia of pregnancy
2. cervicobrachial pain syndromes
3. chest wall syndrome
4. costochondral syndrome
5. costoclavicular syndrome
6. brachialgia statica paresthetica
7. first rib syndrome
8. hyperabduction syndrome
9. nocturnal acroparesthesia
10. nyctalgia paresthetica
11. scalenus anticus syndrome
12. scapulocostal syndrome
13. tired arm syndrome

In the absence of neurological or vascular signs, postural exercises relieve the symptoms in almost every patient.

HARRY F. KLINEFELTER **MD**
Baltimore

• • •

Issue on Aging

Congratulations on the November issue of the *Maryland Medical Journal*, the content of which related predominantly to Our Aging Population: Issues in Health Care.

Individually and collectively, the articles were interesting, well written, clinically useful, and timely. We as a profession need more such articles and issues to assist us in delivering quality, humane care to our aging citizens.

The authors and editorial staff are to be commended for this fine issue.

JULIAN W. REED **MD, Medical Director**
Deaton Hospital and Medical Center
Baltimore

Editor's note: *Michael A. Murray, Med-Chi's Director of Operations, deserves special recognition for his invaluable assistance in compiling the above issue.*

Wanted: Families with Genetic Disease Tuberous Sclerosis

The National Tuberous Sclerosis Association (NTSA) is a nonprofit organization dedicated to providing educational information and support to victims of TUBEROUS SCLEROSIS and to their families.

A parent support group is forming in the metropolitan Washington area to meet the needs of families who have children with this disorder. Typically, such support groups meet once a month to provide needed emotional support and to exchange important information.

A vital research need also is served when the number of families with tuberous sclerosis is known, since the amount of funding dollars available for research into the cause (and possible cure) of tuberous sclerosis is closely linked to the incidence of the disease in the population.

All families with tuberous sclerosis are encouraged to contact the National Tuberous Sclerosis Association, PO Box 612, Winfield, IL 60190; or call 1-800-CAL-NTSA. You may contact the Maryland representative by calling 301-599-9098.

MARY GILEWSKI
National Tuberous Sclerosis Association

• • •

Futuristic Medicine

It seems that thrombolytic therapy is here to stay for the early treatment of patients suffering an acute myocardial infarction. It is being carried out in the hospitals because the drug Streptokinase has a considerable potential for side effects even though this has not been the experience to date. The drug t-PA (tissue plasminogen activator) seems to be just around the corner in producing even better results but with less potential complications and, most importantly, is on the verge of being FDA approved.

If the above sequences take place and t-PA is readily available and is demonstrated to be an innocuous drug in the field, then the early treatment of an acute myocardial infarction will be outside the hospital. It initially may be through the emergency medical system, using paramedics, but it could involve physicians in their offices or physicians on the scene when the patient is suffering an acute myocardial infarction. For this to take place, EKG evidence of ST elevation must accompany the clinical presentation. Intravenous fluids will have to be available to give Xylocaine, Tridil, as well as the bolus of t-PA. Since arrythmias accompany the resolution of the clot, nearby defibrillators will need to be present.

The field of emergency cardiac care is rapidly ex-

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panding to the community where the problem of coronary artery disease always has existed, both in forms of sudden death as well as early myocardial infarction. We have excellent set-ups for the sudden-death aspect of the problem, but futuristic medicine in cardiology will have to involve more of a comprehensive community approach for maximal patient benefit (prevention or reduction of myocardial damage). But it will have to be well thought out.

A field t-PA study is being worked out at the Johns Hopkins Hospital, University of Maryland (MIEMSS), and Francis Scott Key Hospital to test the feasibility of such a futuristic approach. Futuristic medicine in cardiology may even have the practicing physician start the bolus of t-PA in the office setting. And why not . . . if we believe that the best medicine is early cardiac intervention? Chest pain with ST elevation that is present more than 15 minutes is usually considered thrombotic and past the spasm and invites the early and judicious use of thrombolytic therapy. It is an exciting future, but the approach needs to be systematic, logical, and well thought out to maximize the risk/benefit ratio. We excitedly await the t-PA field study in this regard.

RAYMOND D. BAHR **MD**
Director, The Paul Dudley White Coronary Care System
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Look for *Med-Chi Meetings* schedule in each issue of *MMJ.*

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Executive Committee and Council Actions

Executive Committee—September 23, 1986

• **Organization of the Faculty** There should be a strong executive and staff working cooperatively with the physician leadership. Reorganization of the House of Delegates should be considered to change from a largely ceremonial format to a more serious and business format with resolutions and reference committee reports.

The new Executive Director should prepare a summary for review by the Executive Committee, outlining the operation of the Faculty.

• **Membership** There is a potential future problem in this area with the new tax bill. A new membership brochure is being prepared. There should be a member-driven marketing approach for recruitment and retention of members.

• **CHAMPUS Contract and Related Issues** Donald T. Lewers MD advised everyone of the status of the negotiations. J.D. Drinkard MD added information concerning recent activity in Congress. Joseph Harrison advised on the progress of research into the development of a statewide IPA.

The committee agreed to ask Council and the House of Delegates for an enabling resolution directing the Faculty to continue to explore the formation of a statewide organization with the capability of negotiating contracts on behalf of physician members in the future.

• **Quality Assurance** The Peer Review Task Force is exploring mechanisms by which quality assurance activities could be performed both within the physician community and by contracting with outside entities.

• **Medical Mutual Liability Insurance Society** Communication with physician members of the Med-Mutual Board indicates there is no relationship between the insurance company and the Faculty. The lack of appropriate communication between the two organizations is cause for great concern. Unsuccessful attempts have been made to appoint Joseph Harrison to the Board of Directors and to obtain the names of the 1 percent of physicians who are responsible for over 50 percent of the claims. These issues will be pursued vigorously.

• **Peer Review/Commission on Medical Discipline** Concern was expressed over the continuation of fee review cases and the antitrust implications of them, as well as the entire question of physician immunity in the peer review process. There was discussion of the overload of cases presented by the addition of arbitration cases to the process. A better mechanism for handling these cases.

• **Research and Development** While there is no actual charge to a department of this type at present, the need for its creation is recognized. Staff is to prepare a draft proposal for Executive Committee review, outlining the focus of the department, staffing needs, and cost estimates.

• **Organizational Image Relationship with DHMH** Members of the committee defined the problem of poor communications with the Department of Health and Mental Hygiene. Consideration should be given to having a member of the chief staff of the Health Department serve as an ex-officio member of the Council. Further discussion will be initiated when new DHMH leadership is announced.

• **Maryland Foundation for Health Care** A request has been received from the Delmarva Foundation for support for their PRO bid should HCFA turn down the bid from the Maryland Foundation for Health Care. This issue will be placed on Council agenda for September 27.

• **Young Physicians Section of AMA** A request has been received from AMA to send a delegate and alternate to the first Young Physicians Section meeting in December. Since our section is not yet formed, any delegate sent would need to be nominated by Council. This item will be placed on the Council agenda for September 27.

• **Small Area Practice Variation Study** Leon E. Kassel MD reported that work has begun on analyzing the data. The first area of study will be coronary artery bypass surgery. An RFP (Request for Proposal) has been received from the Health Department and a criteria committee is being formed to review the data. The study will begin in December or January. Dr. Lewers reported that unanalyzed data was presented at a hearing on the formation of Atlantic General Hospital.

• **MMLR** There was concern that this organization is syphoning physician support from Med-Chi and discussion about dissolving the relationship between the two groups. The decision was that the next issue of the *President's Letter* should contain a strong statement about what Med-Chi has accomplished in the malpractice area. It was decided that members of the Executive Committee should be available to speak at county medical societies and other groups in order to develop the concept that Med-Chi is working for the membership. A cadre of physician testifiers will be formed for Annapolis testimony.

• **Specialty Society Survey** Data on the survey conducted will be presented at the next Executive Committee meeting with action to follow at the Council meeting in November.

Council—September 27, 1986

• **Adoption of Minutes** Minutes for the following meetings were approved as distributed:

Executive Committee, June 26, 1986
Council, June 26, 1986
Executive Committee Conference Call, July 29, 1986
Executive Committee, August 14, 1986

• **New Executive Director** Michael R. Dobridge MD advised Council of the search process for a new Executive Director in which 77 applications were received; six were interviewed. Three finalists were interviewed by the Executive Committee and its unanimous

recommendation to Council is Angelo Troisi, currently serving as Executive Director of the Prince George's County Medical Society. Motion by Donald W. Wiczer MD: That the confirmation of Angelo Troisi as the new Executive Director of the Medical and Chirurgical Faculty be given by acclamation; seconded by Benjamin S. Pecson MD. Following discussion and upon unanimous vote of Council, Troisi was confirmed as Executive Director.

• **Commission on Medical Discipline** Ballots were distributed, tellers appointed, and votes cast for the two nominees submitted by component medical societies:

Anthony H. Woodward MD, Orthopedic Surgeon, Carroll County Medical Society
Robert G. Kindred MD, Orthopedic Surgeon, Montgomery and Prince George's County Medical Societies

A total of 30 votes were cast: 27 for Dr. Kindred and three for Dr. Woodward. Dr. Kindred's name will be submitted to the Secretary of the Department of Health and Mental Hygiene to fill the unexpired term of Thomas Cimonetti MD, who has resigned.

• **Policy Statement on Second Opinions** Louis C. Breschi MD addressed the members regarding the revised policy statement. Discussion concerned the possibility of waiting for federal guidelines on second opinions to change. A motion to refer the issue back to committee failed, and following discussion, Council adopted a revised policy statement on second opinions:

The Faculty recommends that consultants considered for second opinions be deemed qualified on the basis of Board qualification or certification or on the basis of training or experience.

• **1986 Dues Waivers** Council approved dues waivers for these physicians at the request of the component society indicated:

Baltimore City:	Neil Novin MD Baltimore (illness)
Baltimore County:	John M. Arthur MD Baltimore (semiretired)

• **Emeritus Membership** Council approved and recommended to the House of Delegates Emeritus Membership for the following physicians, at the request of the component society indicated (all retired);

Baltimore City:	Beatrice L. Selvin MD Baltimore
	Abraham M. Schneidmuhl MD Baltimore
Baltimore County:	Leonard H. Berger MD Baltimore
	D'Arnaud Gerkens MD Lutherville
	James J. Gibbs MD Baltimore
	Harold R. Weiss Baltimore
Calvert County:	Osman Z. Ersoy MD Prince Frederick
Carroll County:	Rafi Q. Iqbal MD Sykesville
Howard County:	William J. Bryson MD Cooksville
Montgomery County:	Roland J. Cavanaugh MD Silver Spring
	Herbert J. Jacobs MD Silver Spring
Prince George's County:	Santiago L. Garza MD Marlow Heights
	Marcia B. Kraft MD Silver Spring
Wicomico County:	Gladys M. Allen MD Westover
	Dermot J. O'Neill MD Salisbury

• **AMA Alternate Delegate** On recommendation from the Resident Society, the appointment of Philip Schneider MD as alternate delegate to the AMA to fill out the unexpired term of Mark Johnson MD was confirmed unanimously.

• **1987 Semiannual Meeting Date** On review of previously requested information, Council approved a change in the date of the 1987 semiannual scientific session from September 1987 to January/February 1988. The meeting of the House of Delegates will be held as usual in September 1987.

• **Implementation of SB 560** Council reviewed and discussed the proposal that has been accepted by the Commission on Medical Discipline. The proposal, marked "Draft 2," will be revised several times before final implementation. Council unanimously approved the proposal and asked that future drafts be circulated to all members to keep them informed of progress. The contract with the Commission calls for a budget of $40,828.

• **Membership Survey** Request from the Department of Government Relations to survey the membership was approved, along with the proposed budget of $7,000 to $10,000. The survey will be developed in consultation with the Department of Survey Design and Analysis of the AMA.

• **Peer Review Protocol** After discussion, Council approved a peer review protocol that will be presented to the Commission on Medical Discipline for adoption. If accepted by the Commission, the protocol will provide for the Faculty to receive all complaints, to refer them to the appropriate organization for review, to keep track of the time elapsed in the review process, and to electronically monitor the process.

• **Professional Liability Initiative** Israel H. Weiner addressed Council and presented a request from the Legislative Committee for funding for development of a brochure on liability issues to be used by physicians and a coordination of efforts on behalf of the component medical societies during the next session of the legislature. Council approved the request with a budget of

up to $10,000.

• **General Accident Insurance Company** Judith Wood, Legal Counsel, reviewed with councilors the investigation into possible litigation on behalf of physicians against the General Accident Insurance Company following the company's withdrawal from the state. The facts uncovered during the investigation do not support any cause of action at this time.

• **CHAMPUS Capitation Plan and Enabling Resolution** Dr. Lewers explained in detail the current status of the Department of Defense initiative to capitate the CHAMPUS insurance program. He outlined the work of the Alliance of State Physician Networks to form a group that could bid on the CHAMPUS proposal. After a thorough discussion of the issues, a resolution was presented to the members of Council, along with background material on alternative health systems and information on antitrust laws. Dr. Lewers explained that the resolution would permit the Faculty to proceed with formation of an organization in Maryland that could bid on contracts. After amendment, the following resolution was adopted:

> *Resolved*, That the Medical and Chirurgical Faculty of the State of Maryland become a member of and participate in a membership organization to inquire into and respond to the proposal by the Department of Defense to restructure the CHAMPUS Program, and other issues of common interest, and
>
> *Resolved*, That the Medical and Chirurgical Faculty begin an investigation into the feasibility of creating a statewide organization or network of physician IPAs capable of entering into contracts for the provision of health care on behalf of its physician members, and
>
> *Resolved*, That the Council shall have the authority to authorize expenditure of funds and the creation of such an organization should the investigation indicate that such an organization should be formed.

• **Maryland Foundation for Health Care** Dr. Lewers read a letter from the Delmarva Foundation for Medical Care requesting support of the Faculty should the Maryland Foundation fail to receive the next PRO. Members expressed concern over supporting Delmarva but indicated that the Faculty should work with any group who is the successful bidder. A letter to that effect will be written to the Delmarva Foundation.

• **AMA Young Physician Section Delegate** Dr. Lewers explained that the Young Physician Section of the AMA will have its initial meeting in December in conjunction with the semiannual meeting. The Faculty has not established its section at this time but is eligible to send a delegate to the first meeting. Council approved the appointment of one individual to attend the meeting; that person will be selected from the Task Force formed to develop the guidelines for establishment of the section within the Faculty.

• **Task Force on the Elderly** Dr. Lewers reported to the Council that this group has met and is working under the direction of Manning W. Alden MD.

• **Obstetrical Crisis** Dr. Lewers reported on the crisis in the lack of obstetrical services in seven areas of the state. A meeting will be held within two weeks with the Secretary of Health and Mental Hygiene and the appropriate people in each of the affected counties. In the discussion, members expressed concern over the quid pro quo that could be expected of physicians should the state assist in the payment of malpractice insurance premiums. Upon a motion by Dr. Wiczer and proper second, Council expressed its serious concern over the growing lack of obstetrical services to patients in the state and expressed its support for Dr. Lewers in his work to help seek a solution to the crisis.

• **Auxiliary Remarks** Mrs. Nancy Howell, Auxiliary President, reminded councilors that the Auxiliary dues are included on the general dues bills received in the physician's office. She requested members to be sure to pay the Auxiliary dues and to inform the members of their component societies to do so as well.

• **Resolution on Elza S. Davis** Dr. Israel Weiner presented the following resolution to Council, which was adopted unanimously and sent to the House of Delegates:

> Whereas, following the untimely death of John Sargeant, the Medical and Chirurgical Faculty was left with a void in its leadership which was ably filled by Ms. Elza Davis as Acting Executive Director;
>
> Whereas, Ms. Davis's diligence and expertise facilitated the Medical and Chirurgical Faculty's functioning during this critical time; and
>
> Whereas, Ms. Davis's untiring efforts in Annapolis and throughout the state on behalf of physicians contributed to the enactment of the first meaningful tort reform legislation adopted by the State of Maryland; therefore, be it
>
> *Resolved*, That this Council expresses its heartfelt appreciation to Ms. Elza Davis for a job well done and expresses its hope that her wise counsel will continue to be available to the physicians of Maryland for many years to come.

• **MMLR** Marvin Schneider MD brought to the attention of Council a letter sent from William Finney MD to the presidents of the component medical societies concerning peer review activities in each county. After discussion, it was decided that a letter should go to Dr. Finney informing him of the appropriate action open to him in the future, should he wish similar information.

Executive Committee

Conference Call—October 14, 1986

Two items needed to be discussed because of deadlines:

• The Executive Committee decided not to sponsor Andrew Sumner MD as Med-Chi's nominee to the United Way's "Leadership" program for Greater Baltimore. It was decided to investigate the possibilities of such sponsorship by the Baltimore City Medical Society.

• The Executive Committee unanimously decided to move forward with an appeal to the Maryland Insurance Commissioner's recent position allowing an insur-

ance company to selectively refuse to write for a given specialty, i.e., OB/GYNs.

Executive Committee—October 23, 1986

• **Case Against Insurance Commission** John King, Esq. reviewed the various pros and cons relative to the Faculty filing an appeal to the Insurance Commissioner's ruling to allow Pacific Employer's Insurance Company to write medical malpractice insurance for Maryland physicians except those physicians practicing obstetrics. After discussion, it was moved and seconded that Med-Chi not appeal the case.

• **Department of Government Relations** John Stierhoff briefed the Executive Committee of the specific issues to come before the 1987 legislature. He stated there will be legislative receptions held throughout the state to introduce newly elected and key incumbent legislators to Med-Chi officials and officers of component medical societies at a cost ranging from $400 to $700 per reception. A motion was made and seconded to invite the *entire* legislative delegation throughout the state to the receptions. Stierhoff also reviewed the membership survey to be conducted to secure data to back up changes in practice patterns and other pertinent information.

• **Obstetrical Services** Dr. Lewers reported there was no solution coming from a recent meeting with Secretary Wilzack in discussions on the lack of obstetrical care throughout the state. Dr. Lewers mentioned that a possible solution would be to create a fund to assist OB physicians with partial payment of their malpractice insurance premiums; the monies to support the fund could possibly come from community involvement—assessments on all health care providers such as physician assistants, nurses, Blue Cross/Blue Shield, etc. Additional meetings will be held with Secretary Wilzack in hopes of resolving the problem.

• **Public Relations** James Bell MD, Chairman of this committee, advised that Med-Chi has been invited to write articles for Dr. Neil Solomon's column on issues of interest to Med-Chi. After discussion, it was moved and seconded to refer the matter to the Public Relations Committee with the message that Med-Chi plans to develop its own by-line.

• **CHAMPUS Update** Dr. Lewers informed the committee of recent developments in the CHAMPUS Program. He advised that the Alliance for State Physician Networks now has 18 member states and that the AMA has offered to support the Alliance in the form of staff assistance as a resource for information.

• **Task Force on IPAS** Dr. Kassel, Chairman, announced that the task force has been formed and a meeting has been scheduled for Monday November 3. He explained the goal of the task force will be to determine the need for an IPA and if Med-Chi should establish a physician-controlled health delivery system.

• **1987 Meeting Dates** The following dates were approved for 1987 Executive Committee meetings:

Thursday, January 8, 4 p.m.
Thursday, February 12, 4 p.m.
Thursday, March 19, 3 p.m.
Thursday, April 16, 4 p.m.
Thursday, May 21, 3 p.m.
Thursday, June 18, 4 p.m.
Thursday, July 16, 4 p.m.
Thursday, August 13, 4 p.m.
Thursday, September 17, 4 p.m.
Thursday, October 15, 4 p.m.
Thursday, November 19, 3 p.m.
Thursday, December 17, 4 p.m.

• **Specialty Society Representation** Material presenting the responses received to date from specialty societies indicating their interest in serving on the Council and in the House of Delegates was distributed for information only. Staff was directed to conduct further studies to determine what has been done in other states and the resulting effect.

• **MMLR Joint Statement** After lengthy discussion, Executive Committee approved the cooperative statement submitted by MMLR. It was also the committee's decision that Elza Davis, who has been serving as Med-Chi's representative to MMLR along with Gary Rosenberg MD, will be asked to continue serving in this capacity until such time as a need for change develops.

• **Specialties Certification** Judith Wood reviewed the contract between Med-Chi and the Board of Medical Examiners, which calls for Med-Chi to evaluate 300 physicians per year in determining their competence to specialize in a particular field. The rate of $15 each for a total of $4,500 for the evaluation was determined by the Executive Committee to be low considering the amount of work involved. Staff was directed to work with the Board of Medical Examiners to come up with a more appropriate contract. This item was tabled until additional information is available.

• **Med-Mutual/Magan MD Case** The committee discussed the Magan decision, currently on appeal to the Maryland Court of Special Appeals, with legal counsel. It was the committee's decision to enter an appearance as *amicus curiae* solely on the issue of Med-Mutual's underwriting standards.

• **Med-Mutual** Dr. John G. Lodmell's response to a letter from the Faculty regarding issues of concern to physician's was distributed for information.

• **AIDS Update** Dr. Drinkard updated the committee on recent developments concerning AIDS and asked for guidance in determining if a conflict of interest might exist in his involvement in preparing a research proposal being developed in conjunction with Sheppard Pratt Hospital. The committee saw no conflict of interest and so approved.

Dr. Drinkard also requested approval for mailing a brochure to physician members to aid them in identifying all facets of the disease. Cost figures for printing and mailing are to be determined and presented to the

Executive Committee for consideration.

The question of acting as Faculty spokesman on the subject of AIDS was posed by Dr. Drinkard; it was the committee's decision that a joint statement with the president would be more appropriate. However, Dr. Drinkard was granted approval to act as Faculty spokesman on the subject of AIDS for TV appearances.

• **For-Profit-Organization** The Faculty's Finance Committee is presently engaged in establishing means to increase the nondues income and will continue to study alternative methods such as stock organizations, etc.

• **MED-CHI Organization** The Executive Director reminded members that the recent information on organization of Med-Chi sent to them recently is strictly preliminary and encouraged them to send him their comments.

• **Physician Opinion Survey** Joseph Jensen explained that the physician opinion survey is a mechanism designed for quick access to information and opinions on particular issues of interest to Med-Chi and its members. An invitation for physician participation in this survey will be published in the November issue of *MMJ*.

• **Blue Cross/Blue Shield** The Executive Committee discussed, at length, the recent decision of BC/BS to apply the participating agreement to the major medical programs. It was moved and seconded that a letter be sent to BC/BS under the president's signature adamantly protesting this decision. An item is to be published in the President's Letter to advise Faculty members of this action.

• **Commission on Medical Discipline Data System** Joe Jensen advised the committee that legal counsel had reviewed the contract with the Commission. The contract becomes effective on November 15.

• **Louis A.M. Krause MD** The committee approved a letter to be sent to Mrs. Louise Krause, sister to Louis A.M. Krause MD, to assure her that the Faculty will dedicate a History of Medicine Room in Dr. Krause's name.

• **Committee on Scientific Activity** The Executive Committee approved the following nonmember registration fee structure for attendance at the Faculty's annual meeting, effective with the 1987 Annual Meeting, as recommended by this committee:

$100 Nonmember Physician—could be applied to first year's dues (registration fee would not be levied on invited guest physicians)
$5 Nonmember Resident, Intern, Student—same application as above
$15 Allied Health Personnel and others

• **Request for Labels** A request for mailing labels for use by Physicians Care was received from the Montgomery County Medical Society. Faculty policy dictates that provision of labels to for-profit organizations is prohibited. The Executive Committee declined the request, and the Montgomery County Medical Society will be notified.

• **Nomination to AMA Council on Legislation** Dr. Lewers reminded the Executive Committee that he is planning to pursue a position on the AMA Council on Legislation and requested that a letter of support from the Faculty be sent to the AMA endorsing him as our nominee. The Executive Committee so approved.

In March: Dealing with the Impaired Professional

Professionals have been found to be at greater—not lesser—risk than the general population for the problems of alcoholism, drug addiction, and psychiatric illness. This special issue of *MMJ* is meant to serve as a resource document for persons and organizations interested in learning more about problems of impairment and effective strategies for intervention.

A conference on April 10, 1987, *Dealing with the Impaired Professional: Identification, Treatment, Prevention*, is the first attempt in Maryland to offer an educational and training event for the wide range of people concerned with this issue. It is co-sponsored by the Medical and Chirurgical Faculty, Medical Mutual Liability Insurance Society of Maryland, and the Health and Education Council, Inc. in cooperation with nine other Maryland organizations. For information on registration and accreditation: Health and Education Council, Inc., 7201 Rossville Blvd., Baltimore, MD 21237 (301-686-3610).

Alzheimer Disease. Meridian Healthcare is helping to do something about it.

As the largest provider of long-term nursing care in Maryland, Meridian Healthcare is in a unique position to exercise some leadership in developing new techniques for caring for Alzheimer victims. Even more important, we have made a commitment to actively assist with the search for a cure for this serious, terminal condition.

A specialty Alzheimer Disease Care Unit has been created at Meridian Nursing Center—Heritage in consultation with The Johns Hopkins University Medical Institutions to develop innovative approaches to care. To advance this research, Meridian funds an Alzheimer Disease Research Fellowship in The Johns Hopkins University Department of Psychiatry.

Alzheimer Disease is a little understood, even frightening facet of aging about which more public information is needed. To address this need, Meridian Healthcare has produced a booklet on Alzheimer. This guide will be offered free in commercial radio broadcast advertising as part of Meridian's continuing public information campaign.

Our concern with Alzheimer Disease is only one of many ways Meridian Healthcare is different. For more detailed information on our Alzheimer program or on any of our 13 Nursing Centers in Maryland, call or send the coupon for our free *Referrer's Guide*.

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Executive Director's Newsletter

February 1987

DRG SYSTEM

According to the AMA, President Reagan's 1988 budget will include a provision placing hospital-based radiologists, anesthesiologists, and pathologists under the diagnosis related-groups (DRG) system. The specifics of this provision are not completed. The AMA's battle against this proposal will be a difficult one. I urge you to contact the White House, 202-456-7639, and to express your concern over this budget proposal. Only a concerted effort by all physicians will be effective in supporting the AMA's position.

GOVERNOR'S TORT REFORM LEGISLATION

Med-Chi has been successful in getting Governor Schaefer to introduce several major pieces of legislation addressing the malpractice liability crisis. Scheduled for prompt hearing in Annapolis, these bills include a reduction in the statute of limitations and an abolition of the collateral source rule. We will keep you abreast of their progress.

PHYSICIANS FEE LIST

On January 8, 1987 the Maryland Attorney General's Office released a statewide list of physician fees for selected services based in 1985 Medicare data. The Faculty is very concerned that the guide will be misleading or misunderstood by the public. The guide is based on 1985 Medicare data that is already a year old. Furthermore, there was no way the Attorney General's Office could confirm the accuracy of the Medicare data. Therefore, any errors contained in the federal government records appear in the guide.

To determine the accuracy of the data, we are surveying a sample of the physicians listed in the guide. If the results of the survey indicate a high error rate, we will strongly recommend that the new Attorney General conduct a major study of the data before distributing it to the public.

PHYSICIAN DISCIPLINE SYSTEM

The Commission on Medical Discipline and related peer review activities continue to be the subject of concern by the Legislature, the media, and the public. Faculty members should be aware of the follwowing:

Senate Bill 560 - Through its contract with the Commission on Medical Discipline, the Faculty has accomplished full compliance with this mandate established by the 1986 General Assembly. This includes notification to each hospital where a physician has priviliges of malpractice claims filed with the Health Claims Arbitration Office, of the reduction or revocation of privileges by another hospital, and whether the Commission determines that a physician poses an imminent threat to patient safety.

Commission on Medical Discipline Complaints - The Faculty is functioning as the referral source and tracking mechanism of all complaints received by the Commission on Medical Discipline.

This action is based on protocol approved by the Commission and by the Faculty Council.

Educational Initiative - Responding to the concerns of several of its component societies, the Faculty has begun an educational initiative to improve the physician discipline system on all levels.

We have already collaborated on a proposal under consideration by the Robert Wood Johnson Foundation to improve privileging, credentialing and peer review processes involving hospitals, the Faculty, and the Commission.

The Faculty's legal counsel and the Attorney General's Office are developing a working document to achieve standardization of efficient peer review.

Finally, a presentation on proper peer review methodology will be made at the Annual Meeting on Thursday, April 30, 1987 at 8:45 AM.

Should any physician require clarification in this area, please contact Michael Murray at the Faculty office.

BUILDING UPDATE

The renovation of the new Faculty building at 1205-1207 Cathedral Street is complete except for a few minor modifications. Physicians attending meetings at Med-Chi may park on the Faculty lot off Maryland Avenue and use the rear entrance of the new facility. The Faculty mailing address and telephone number will remain the same. Phase two of the renovation, which includes upgrading the old Faculty headquarters, is now in progress.

ANNUAL MEETING

The 189th Annual Meeting of the Faculty will be held Wednesday, Thursday, and Friday, April 29, 30 and May 1, 1987 at the Omni International Hotel in downtown Baltimore. Watch your mail for an advance program.

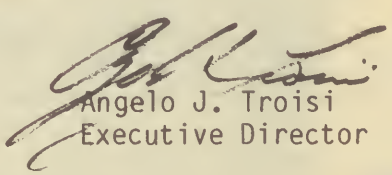
RESOLUTIONS DEADLINE

Resolutions to be considered by the House of Delegates at its Annual Meeting on Friday, May 1, 1987 must be received in the Faculty office by FRIDAY, MARCH 6, 1987.

INCOMING TELEPHONE CALLS

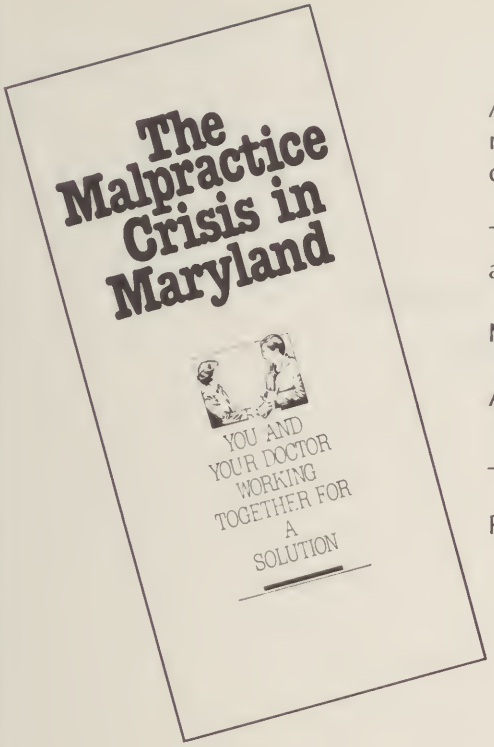
We have had some difficulty in receiving incoming telephone calls due to a malfunction of one of our trunk lines. We have been assured that the situation has been corrected.

Med-Chi receives an average of 485 incoming calls per day.



Angelo J. Troisi
Executive Director

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Proposed New Issue

1,200 Units of Limited Partnership Interests

PHYSICIANS CLINICAL SERVICES LIMITED PARTNERSHIP

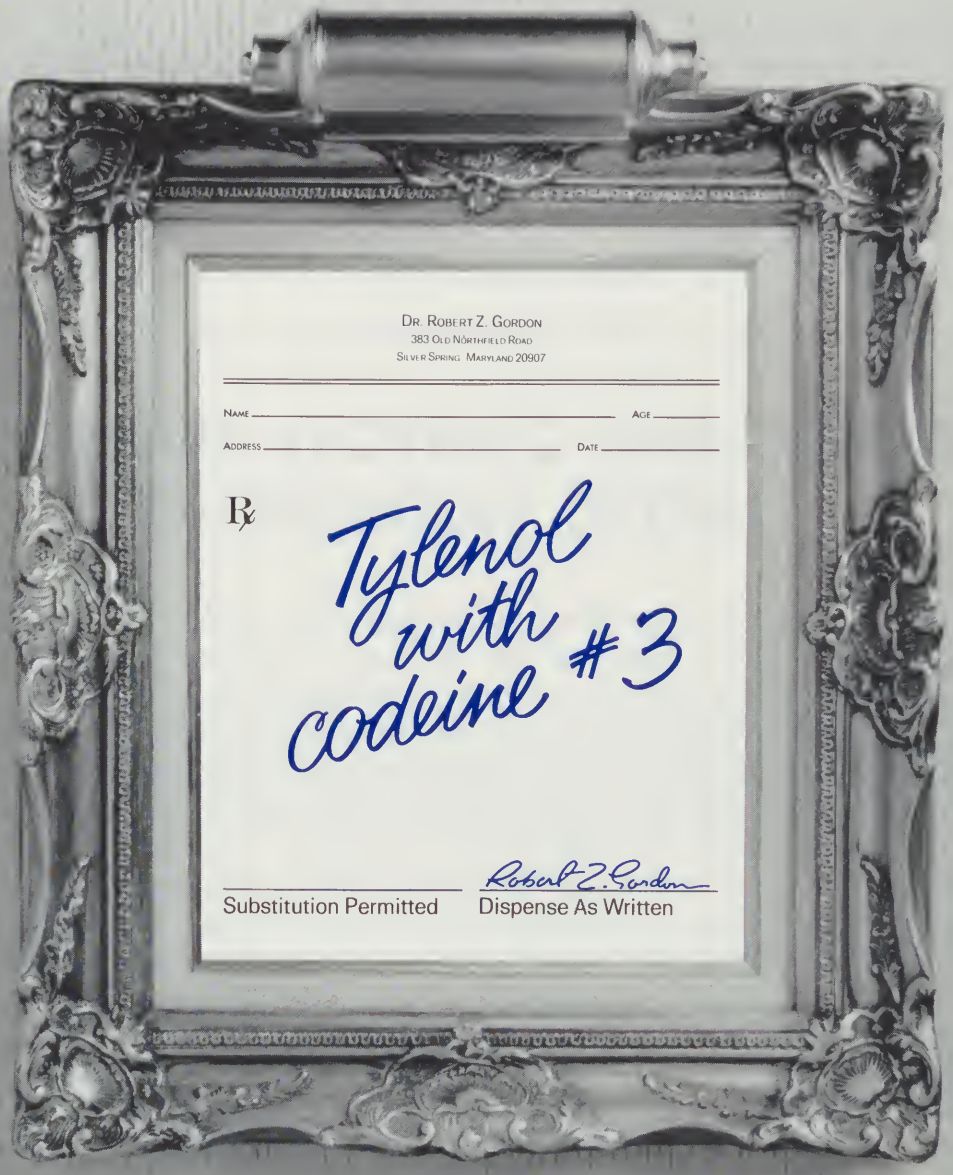
Physicians Clinical Services Limited Partnership (the "Partnership") has been formed to offer its investor group an opportunity to share in the equity of a clinical reference laboratory, as well as other health care related business over time. The Partnership will own and operate a clinical reference laboratory equipped to provide clinical testing services in the five-state region of Pennsylvania, New Jersey, Maryland, Delaware and the District of Columbia (the "Defined Service Area"). It will provide out-patient clinical laboratory testing services for the patients of its customers, including Limited Partners, throughout this Defined Service Area.

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MARYLAND DEPARTMENT OF HEALTH AND MENTAL HYGIENE

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FEBRUARY 1987

ATYPICAL MYCOBACTERIAL UPDATE

As the overall incidence of mycobacterial disease has decreased in the United States, the proportion of people infected with pathogenic atypical or non-tuberculosis mycobacteria has increased. The non-tuberculous mycobacteria are related to Mycobacterium tuberculosis and can cause illness clinically indistinguishable from tuberculosis. Despite many similarities among tuberculosis and non-tuberculous mycobacteria important differences exist.

Unlike M. tuberculosis, the atypical mycobacteria are not transmitted from person-to-person. These infections are presumed to come from environmental sources such as soil and water. This mode of transmission makes contact investigation and isolation of the patient unnecessary.

The diagnosis and therapy of non-tuberculous mycobacterial infections are considerably more complicated than those generally required for tuberculosis. M. tuberculosis and atypical mycobacteria can both produce positive tuberculin skin tests and are identical on acid-fast smears. The observation and speciation of laboratory cultures is necessary to distinguish non-tuberculous mycobacterial species from one another and from M. tuberculosis. It is important for the involved clinician to learn the correct species in order to prescribe the appropriate therapy. Maryland law requires that all mycobacterial cultures be speciated by the State Health Department or other approved laboratories.

A positive culture of M. tuberculosis is adequate to establish a diagnosis of active tuberculosis. However, in the case of positive non-tuberculosis mycobacterial cultures, a complete medical assessment of the individual patient is necessary to determine if infection or merely "colonization" is present. Generally, repeated positive cultures or tissue isolation of a pathogenic species of non-tuberculous mycobacteria are required to document a true infection. The fact that some mycobacterial species may occasionally be pathogenic tends to make an accurate diagnosis more difficult.

The treatment of a non-tuberculous mycobacterial infection may be even more complex than its diagnosis. The occurrence of progressive clinical disease not attributable to other medical conditions in the presence of appropriate positive cultures, generally indicates the need for therapy. Some species (e.g., M. kansasii) respond well to therapy with anti-tuberculosis agents. However, other species (e.g., M. avium-intracellulare) are difficult to treat with routine anti-tuberculosis drugs. This latter group of "atypicals" require long-term therapy with complex multi-drug regimens. Even with the use of resectional surgery in selected cases, the number of treatment failures remains distressingly high.

Atypical mycobacterial disease has been reportable in the State of Maryland since 1983, but significant problems continue to exist with compliance from both clinical laboratories and physicians. Although not communicable, the disease presents grave health problems, especially to immunocompromised patients, notably those patients with AIDS. In addition, since some atypical organisms respond to treatment, these are of importance to the Respiratory Disease Control Program.

The incidence of atypical disease in Maryland is also important for establishing morbidity statistics. Since Maryland is an area of the United States which has a high incidence of atypical disease and is a state where water abounds and the soil is conducive to mycobacterial growth, it is necessary to examine the impact of atypical disease on various population groups and to develop programs to meet these needs.

Incidence rates for atypical disease in Maryland are difficult to provide due to incomplete information on the morbidity card. It is imperative that the reporting physician fill out this card as completely as possible with special emphasis on the treatment given. We have collected all available data on positive atypical mycobacterial cultures over the past three years from Baltimore City and all 23 Maryland counties.

Positive cultures were identified on the following atypical species: M. avium-intracellulare (MAI), M. kansasii, M. chelonei, M. fortuitum, M. gordonae, M. terrae, M. scrofulaceum, M. bovis, M. xenopi, M. malmoense, M. vaccae, and M. flavescens.

M. avium-intracellulare (46 cases) and M. kansasii (22) are the two species which were most commonly treated. Other species which occasionally received chemotherapy were M. chelonei (1), M. fortuitum (2), M. scrofulaceum (1) and M. bovis (1). Although MAI was occasionally found in the western counties, it was predominately cultured from residents of Baltimore City and those counties surrounding the Chesapeake Bay. The distribution of our M. kansasii isolates, while more commonly involving the western counties, is similar to that for MAI.

Both tuberculosis and non-tuberculosis mycobacterial disease are frequent infections in patients with AIDS. As the population with HIV infection continues to expand, the incidence of atypical mycobacterial disease, especially the disseminated form, will undoubtedly increase. With ongoing research and clinical trials, newer and more effective forms of chemotherapy are being developed. Increased physician awareness combined with these more effective treatment regimens will progressively benefit all patients, even those with the most difficult to treat forms of atypical mycobacterial disease.

William E. Randall, Jr., M.D. State Consultant to the Division of Tuberculosis Control, is available for consultation on the diagnosis and treatment of atypical mycobacterial disease as well as tuberculosis. He can be reached by calling (301)-225-6694.

TB NOTES

The Department of Health and Mental Hygiene has been the repository for all of the tuberculosis morbidity cards for the 23 counties and the City of Baltimore. This requirement was assigned by Maryland law which requires that these records be maintained for a period of 50 years. Confidentiality protection is also mandated except for those with a "need to know", i.e., the health care provider. In addition, each morbidity card has an accompanying index card which details the drug regimen, length of treatment and pertinent laboratory data. The central office, DHMH, has accumulated over 180,000 morbidity cards. Some records contain information encompassing the entire 20th century.

Morbidity and index treatment cards for the years 1975 through the present from the 23 counties and Baltimore City will continue to be maintained at DHMH, and these data will be available to appropriate health care providers. Data from the sanatoria and morbidity and treatment index cards from other years will be retired to archives. This may present some problems for the physicians providing care to patients with a previous history and treatment of tuberculosis.

DHMH will maintain a master list of all morbidity cards assigned to archives. These will be in alphabetical order and categorized by year of report. This information may be of assistance to physicians, e.g., some patients may confuse the history of a significant tuberculosis skin test with tuberculosis disease; the master list will contain only patients who had active disease. We expect to complete all this by June, 1987. It is impossible to maintain the treatment regimens for each patient. Space requirements, again, limit this option.

The Federal Drug Administration (FDA) was contacted for public release and approval dates for antituberculosis drugs. These drugs and approval dates are listed below. William E. Randall, Jr., M.D., Consultant to the

Tuberculosis Program for the State of Maryland, reviewed a sample of the treatment index cards sent to archives.

The chemotherapy era for M. tuberculosis began in 1946 with the approval of streptomycin for the general public. Para-aminosalicylic acid (PAS) was the next drug released and together with streptomycin provided the first drug combination for tuberculosis. The next clinical break-through came in 1952 when isonizaid (INH) became available for clinical use. The subsequent drug regimen of INH, PAS, and streptomycin provided the first very effective chemotherapy for tuberculosis. The duration of chemotherapy ranged from a few months to several years, with prolonged therapy being the general rule. Various forms of "collapse therapy" including pneumothorax, pneumoperitoneum, thorocoplastly, plumbage, and phrenic neve crush were commonly prescribed into the 1950's along with chemotherapy. Resectional surgery for residual tuberculosis continued through the late 1960's,

Although ethionamide was introduced in 1965, the next drug with significant impact was ethambutol which became available in 1967. The combination of INH, ethambutol and frequently streptomycin proved extremely effective. This effectiveness cut the duration of required therapy down to 24 months and virtually removed any necessity for resectional surgery.

1971 was the year that rifampin, capreomycin, and Pyrazinamide (PZA) were approved for general use. Although rifampin was not universally used as initial therapy in the early 1970's, by the late 1970's the regimen of rifampin plus INH became the generally accepted first-line therapy for all forms of M. tuberculosis. These two drugs together provide rapid sputum sterilization with low toxicity and low relapse rates. Today, short-course chemotherapy using INH and rifampin together with various combinations of PZA and streptomycin have reduced the required length of therapy down to six months in many patients. This four drug regimen must be directly administered by a health professional.

Cycloserine (seromycin) is a second line drug introduced in the late 70's and has limited but useful application in the treatment of tuberculosis with drug resistant organisms.

Finally, newer drugs such as Rifabutine (ansamycin) and clofazimine are being introduced in the therapy of drug-resistant M. tuberculosis and other mycobacterial infections. As newer chemotherapeutic agents are developed, the treatment of tuberculosis will continue to evolve.

NOTE

In the next issue, we will provide a summary table of probable anti-tuberculosis drug combinations used in Maryland for the treatment of tuberculosis patients during the 20th century.

Smoking
Part IV. Maintenance of Cessation

CAROL S. HAINES MD and CAROL LEWIS ScD

Among people who have recently quit smoking, relapse is as common as sustained cessation. A program to anticipate and avoid stimuli to relapse is described, including nonpharmacologic and pharmacologic assistance with craving, as well as action steps the patient can initiate to avoid weight gain.

Carol S. Haines MD, MPH, is Medical Consultant, Division of Cancer Control, Department of Health and Mental Hygiene. Carol Lewis ScD is Executive Director of the Maryland Commission on High Blood Pressure and Related Cardiovascular Risk Factors.

The primary role for the physician in the treatment of tobacco dependence is to encourage patients to stop smoking.[1] Approximately 95 percent of smokers who quit the habit do so by their own self-directed efforts without formal treatment; brief physician advice as detailed in previous *HBP Commentaries* can stimulate the receptive smoker to make a self-directed quit attempt.[2,3] Unfortunately, since there is no accurate way to identify receptive patients, the prudent course is to advise all smokers so briefly that it does not intrude on consideration of the primary presenting complaint.

The most prevalent error in physician management of the smoking patient is to do nothing. Only 25 percent of smokers report ever having any physician talk with them about their smoking.[4] Since relapse from abstinence is common, the advising physician must be prepared to provide active guidance in this area as well.

Patterns of Quitting and Relapse

Approximately 60 to 80 percent of smokers who attempt to quit achieve at least a minimal period of abstinence. However, regardless of their source of assistance, only 15 to 20 percent of quitters remain cigarette free for six months or more. A cessation attempt should not be considered successful until abstinence has been sustained for at least six months; then the probability of relapse is relatively small. Using the 6 month standard, about 1 percent of smokers permanently quit each year, yielding about 12,000 new ex-smokers annually in Maryland. We have estimated that 2,000 physicians advising every smoker, every visit could provide Maryland with many times this number.[3]

The risk of relapse to smoking is increased (a) when patients are under emotional stress (anger, frustration, anxiety, depression); (b) when ex-smokers are exposed to cues associated with prior smoking (after meals, when consuming alcoholic beverages); (c) in individuals whose spouse or friends continue to smoke, and (d) when undesired weight gain occurs.[5]

HBP Commentary is contributed by the Maryland Commission on High Blood Pressure and Related Cardiovascular Risk Factors, 201 W. Preston St., Baltimore, MD 21201 (301-225-5891). Editors: R. Patterson Russell MD, Past Chairman; Donald O. Fedder PharmBS, DrPH, Chairman; and Carol Lewis MPH, ScD, Executive Director.

True Physiological Withdrawal

True abstinence syndrome upon nicotine withdrawal does occur; physiologic features of the syndrome include slight declines in heart rate and blood pressure. Intolerance for the subjective features of the syndrome, however, generally compel a return to cigarette smoking. These effects commonly are a constellation of temporary (two days to two weeks) mental status changes such as irritability, altered sleep patterns, preoccupation with desire to smoke or eat, and anxiety.[1]

Although there is no widely accepted or readily measurable marker for "addicted" smokers, it is generally true that heavy smokers (two packs per day or more) and those who report smoking as the first activity on awakening, have more subjective abstinence syndrome than other smokers.[1] It will be difficult to recruit these smokers to select a target quit date. When such a smoker makes a quit attempt, the physician will do well to forewarn him or her about expected symptoms and ascertain that the smoker has adequate support, similar to that summarized in this section.

Nonpharmacologic Coping Strategies

The National Cancer Institute provides a pair of pamphlets, *Quit for Good*, that detail many behavioral techniques to aid the smoker on the day he or she quits and immediately after quitting.[6] These include specific activities designed to avoid temptation and to change habits to make smoking difficult or unnecessary. The American Heart Association also publishes similar pamphlets of equally high caliber, available at nominal cost.[6]

The second of the pair of NCI pamphlets, *For Good*, provides state-of-the-art techniques for coping with craving. Examples of situations in which the patient is tempted to smoke (angry boss, anxious social encounter) are provided, along with several possible responses to the stress other than resuming smoking. This material, though written for the lay person, is helpful to health professionals who guide smokers. All smokers making a quit attempt should be advised to read and rely on these materials.

Pharmacologic Assistance with Craving

The short-term effects of abstinence syndrome may require pharmacologic intervention. For some heavy smokers a brief course of antianxiety medications can be a source of significant support. Alternatively, the alpha-2-adrenergic agonist, Clonidine, may prove to

have equivalent or greater short-term efficacy.[7,8] Patients also appreciate the support of a gum resin product, **Nicorette**. Although the efficacy of Nicorette extends beyond the transient withdrawal period and should be prescribed for the longer intervals described below, it has a role in mitigating the immediate and distressing features of withdrawal, and is most valued by patients immediately following cessation.

Both lay and professional understanding of Nicorette is clouded by misunderstandings about its sequential role in the cessation process. First, a decision to quit and a successful quit attempt must occur. For this, Nicorette has no role. Then, and only then, the phase of cessation-maintenance begins. Here, Nicorette has documented efficacy. In a placebo, double-blind study, smokers randomized to placebo had relapse rates twice those of smokers randomized to Nicorette.[9] If a smoker requests Nicorette, explain that its value is in maintaining cessation and then negotiate a target quit date as described in the November 1986 *HBP Commentary*.[3]

For smokers who select a quit date, offer to telephone a prescription for Nicorette on that date. This strategy, although a bit more time consuming, should diminish the number of smokers who use the product while continuing to smoke. If someone from the physician's staff or the physician personally is able to telephone the smoker the day **before** quit date (this avoids embarrassing those who make no or brief quit attempts), instructions on the use of Nicorette could be discussed at that time. This strategy conserves office visit time, eliminates providing time-consuming instructions to those not planning to honor the negotiated quit date, and is appreciated by smokers as an expression of interest and concern. Alternatively, the use of Nicorette can be explained in the office at the time a quit date is negotiated. Excellent patient materials are available from the manufacturer for use with this product.

The most common mistake in using this product is abandoning it too soon.[9] The physician should obtain from the smoker a commitment to keep a bubble pack card of Nicorette available for at least four months in all the places he or she previously kept cigarettes. Further, the patient should be informed that, although some smokers quickly reduce daily use to very few pieces, those who attempt to do without the product entirely run a greater risk of relapse.

Some smokers find it helpful to make frequent use of half-or quarter-sized pieces during the first few days to avoid overdosing and to increase opportunities for substitute handling and manipulation activities. The patient must be warned about dental complications, which may include loss of fillings or bridgework damage.

Weight Gain

The physician must be aware that remarkably few pounds will discourage an otherwise committed quitter. A gain of 75 pounds is required to offset the cardiovascular risk of one pack of cigarettes;[4] however, smokers will find a small fraction of that gain to be unacceptable. Because social, cosmetic, and economic costs of weight gain overwhelm even highly motivated quitters, the physician's role is actively to guide the smoker in preventing or at least controlling weight gain. Thus, weight control is a medical necessity *not* because of the health consequences of the weight gain, but because maintenance of cessation is the joint goal of the physician and the smoker.

Advising about weight gain is a time-consuming process. For this reason, the physician should provide the advice only to smokers who have made a commitment to a target quit date. Helpful guidance about weight control for quitters includes:

1. Suggest taking weights daily (ideally beginning before quitting) with a written record to heighten awareness of random fluctuations.
2. Restructure the feared side effect into a self-management goal: "Since you may eat more after quitting, what foods will you have readily available? What foods will you avoid having on hand?"
3. Request that the smoker not make any decisions about any weight gain occurring in the first ten days, since this may be temporary fluid retention.
4. Link the enhanced well-being of cessation with a new (moderate) exercise regimen: "You'll be feeling so much healthier that you can start having a brisk walk each day."
5. Suggest using exercise for appetite control: "Have your walk before supper if you're most tempted to overeat then, or after supper if your temptation is greatest while watching TV."
6. Negotiate a ceiling weight gain: "How many extra pounds will you live with for 60 days in order to kick the habit?"

Role of Support Groups

Support groups have documented efficacy in maintaining other "life-style" changes, specifically weight control and alcohol and drug abstinence. A group patterned after Alcoholics Anonymous and dedicated exclusively to supporting ex-smokers has been formed. **Smoker's Finito** is based in Maryland at P.O. Box 945, Brooklandville, MD 21022. In addition, Maryland affiliate chapters of the American Lung Association sponsor support groups for ex-smokers. The effect of such activities on relapse is not known.

Relapse

Smoking cessation is a remarkably difficult process, and the physician needs to offer continuing reinforcement and support. It is to be expected that many attempts will end in relapse. This should not frustrate or discourage either physician or patient but should be recognized as a predictable part of the quitting process. Unsuccessful attempts often precede successful cessation; it is important and worthwhile to try again.

The relapsed patient often will be disappointed in

himself or herself and reluctant to make another quit attempt. Therefore, it is important that the physician offer guidance similar to that presented here in an effort to prevent relapse. When relapse occurs, the patient fears nagging, judgmental, or humiliating responses from the physician. These fears are more likely to be dispelled if the physician restates brief, matter-of-fact, concerned, role-appropriate advice to quit than if he or she remains silent or attempts consolation.

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The Hospital Cancer Program

The goal of the Cancer Program of the Commission on Cancer, American College of Surgeons, is to decrease the morbidity and mortality of patients with cancer. This goal is pursued by encouraging each hospital to improve its cancer control efforts in prevention, early diagnosis, pretreatment evaluation; staging of the disease; treatment; rehabilitation; surveillance for recurrent and multiple primary cancers; and to enhance the care of terminally ill patients. The ideal approach is through establishing and maintaining a hospital cancer program. Success of such a program depends on the leadership of a multidisciplinary cancer committee within the hospital. While each hospital is responsible for its own attending staff, education programs, quality of care evaluations and for monitoring its experience in the diagnosis and treatment of patients with cancer, the Hospital Cancer Program must be approved to demonstrate that the necessary elements are in place and functioning satisfactorily by the Commission on Cancer of the American College of Surgeons.

The Commission on Cancer works through four subcommittees: Approvals, Education, Field Liaison, and Patient Care and Research.

The Hospital Cancer Program requires four major components for its approval: (1) An established multidisciplinary **cancer committee** that meets at least quarterly and provides the overall leadership of the cancer program. Membership should be multidisciplinary including representatives from surgery, internal medicine, gynecology, pediatrics, diagnostic and therapeutic radiology, pathology, family practice, nursing, social service, rehabilitation, psychiatry, tumor registry, and administration. The cancer committee must have its own bylaws, and should be a standing Committee in the hospital or medical staff bylaws. This committee oversees the tumor registry, the functions of the tumor conferences, and the patient care evaluation studies. Duties of the committee include organizing, publicizing, conducting and evaluating educational conferences, consultations to patients, and tumor registry. (2) An established **tumor registry** to monitor all types of cancer diagnosed or treated in that hospital. In addition, continuous clinical follow-up of all patients is essential. Therefore, a minimum of two years' follow-up of patients' data and one year of successful patient follow-up of a minimum of 90 percent are required for approval. The tumor registry does not have to include patients seen in consultation only, patients who receive transient care, patients admitted for hospice unit, and patients with benign but precancerous conditions. Members of the cancer committee should be used as consultants to the tumor registry, review registry abstracts, and help in accurate annual reporting of the data. (3) **Cancer conference** (formerly called tumor board) must be clinically oriented and multidisciplinary. It should be conducted weekly, biweekly, or monthly depending on the number of cases. There must be documentation of the cases discussed. (4) **Patient care evaluation**: two studies should be conducted annually. This can cover a single tumor category for both studies or for two different tumors. One study, called short study, is to evaluate the work up of newly diagnosed patients with certain tumors for completeness and staging. The other, long study, evaluates the follow-up and the outcome.

To assist in establishing an approved Hospital Cancer Program, a liasion fellow (surgeon; Fellow of the American College of Surgeons) or a liaison associate (not a surgeon) have been appointed in every hospital in Maryland. Each has the task of establishing an approved cancer program in his or her hospital. He or she should head the cancer committee in that hospital, work with the fellow physicians to form the cancer committee and the tumor conferences, and with the hospital administration, establish and maintain tumor registry. Small hospitals, under 100 beds each, may join forces and share the resources. Hospitals with a new tumor registry can apply to the American Cancer Society, Maryland Division, for initial support of $1,400 to $1,500 to start their registries. It should be pointed out that Maryland has a state registry, free of charge, but it does not include the follow-up that is required for approval. However, the follow-up is available at minimal charge.

The benefits of establishing a Hospital Cancer Program are numerous. It is beneficial to the patient, the treating physicians, and very rewarding to the hospital.

For further information, please write or call me.

Tumor Conferences are held weekly on Fridays between 8 and 9 a.m. in Room N13E28 at the University of Maryland Hospital. This is an open meeting and physicians are welcome to attend. Physicians can present cases, but please call 528-5224 before Friday to obtain time on the schedule for your case(s), and bring the pathological slides with you.

E. GEORGE ELIAS **MD**
State Chairman, Field Liasion Program, ACS
University of Maryland
Surgical Oncology Program

If you have any questions, call or write the Surgical Oncology Program at the University of Maryland Medical System, Room N13E02, Baltimore, Maryland 21201 (301-528-5224).

Area meetings and course announcements are listed each month under *Doctors Take Note*

One Minute with Diabetes

Reactions

Doctor, since I began taking one sulfonylurea tablet daily for control of my diabetes a month ago, I notice when I come home from work and have a cocktail with my wife before dinner I break out into a sweat, blush, and have pounding of my heart. It lasts until we start having dinner, and then it goes away fairly soon. On one occasion when I was late, we did not have a cocktail before dinner and I had no symptoms. Am I having a low blood glucose before dinner, or am I allergic to the medication?

The symptoms described could be those of either hypoglycemia or a disulfiram reaction (Antabuse effect). The timing is compatible with either condition. The fact that the symptoms did not occur when the alcoholic drink was omitted is suggestive of a disulfiram reaction. These reactions, listed under "side effects" in text books, are transient and not serious. They may occur with any of the sulfonylurea drugs but are more apt to occur with the use of chlorpropamide (up to 10 percent).

If the physician has a noninsulin-dependent diabetic patient who uses alcohol excessively, Chlorpropamide should be the drug of choice in hopes that the disulfiram effect will occur and perhaps improve the drinking problem. All patients given a prescription for a sulfonylurea drug should be advised of the possibility of a disulfiram reaction if alcohol is consumed.

It is possible that the patient under discussion also might be having mild hypoglycemia before dinner each day. This should be investigated either by self-monitoring of the blood glucose at that time of the day or by checking the blood glucose at a late afternoon office visit. It is possible for both hypoglycemia and a disulfiram reaction to exist at the same time, and both should be considered.

DeWITT E. DeLAWTER **MD**
Editor

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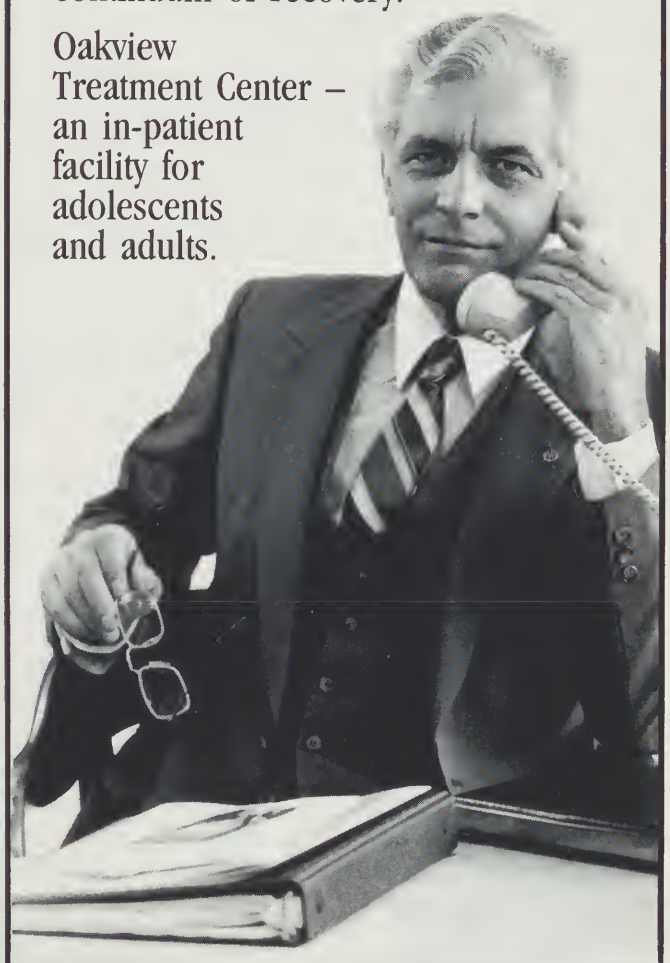
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Doctor to Doctor

Humanistic Medicine Revisited

BERNARD SHOCHET MD

Dr. Shochet, Chairman, Resolution 2A/85 Subcommittee of the Med-Chi Public Relations Committee, is in the private practice of internal medicine and psychiatry in Baltimore City.

There has been much interest recently in teaching young physicians "humanistic concepts in medicine." Ostensibly, this means that physicians should be sympathetic, caring, and understanding in dealing with patients and their families. However, all of the above, although an important part of relating to anxious and frightened people, is not the crux of humanistic medicine. The crux of humanistic medicine lies in the thorough understanding of processes and dynamics of human behavior and interactions, an understanding of how these psychological processes influence and interact with normal and pathlogical physiological states and techniques for studying these processes and teaching these skills. There exists a definable, teachable body of knowledge and skills that can be taught to young physicians in their quest to understand human illness and to treat patients in a rational and humanistic way.

To diagnose accurately and treat effectively the physician needs to understand not only the disease process but also the biopsychosocial factors operating in the person and interacting with the disease process to create that condition we call human illness. The physician needs to develop the skills required to obtain the necessary data base to clarify these factors. How will these skills be acquired?

One of the basic skills young physicians are expected to master is that of physical diagnosis: the observation, palpation, percussion, and auscultation of the major organ systems to detect structural abnormality. Equally important is the basic skill of interviewing to obtain the interpersonal and intrapersonal data to build a psychosocial data base that will allow a fuller understanding of the person and his or her illness, allowing more meaningful and effective therapeutic intervention by the physician. This is truly humanistic medicine in all its dimensions. It is not possible to obtain this kind of medical history without the physician implicitly indicating to the patient his or her basic sympathy, concern, and caring. This method of communication between physician and patient is the epitome of humanistic medicine and will reap many dividends in terms of the quality of the physician-patient relationship, the effectiveness of therapeutic intervention, and a diminution in high cost, high technology medical care that might be unnecessary or inappropriate but that often becomes a substitute for caring for the patient.

These skills, so necessary to the physician, exist as a definable body of knowledge that can be taught to young physicians, much as physical diagnosis skills are taught and learned. First, there must be a foundation knowledge of behavioral dynamics, social dynamics, social clinical epidemiology, and basic psychopathology. Upon this foundation of knowledge can be built skills of interpersonal observation and communication, with the core discipline being interviewing skills. These can be taught in a variety of ways using didactic methods, demonstrations, observation, video recording and playback, and practice with critical review. As with any other learned skill, practice improves performance.

Using the interviewing skills so learned, the physician can then deepen the physician-patient dialogue into the area of the patient's characteristic ways of relating to self and to others, his or her strengths and vulnerabilities, and his or her basic assumptions. This allows an understanding of the patterns of behavior employed by the patient in coping with illness. This evaluation is clarified by the physician and formulated in terms of both a biologic and a personality diagnosis, which may then be validated by subsequent appraisals of the patient. This synthesis of the organic and personality diagnosis is the comprehensive medical diagnosis or the "double diagnosis" that then leads to a therapeutic plan for dealing with the patient and his or her illness.

In the process of using these behavioral communicative skills the physician has an opportunity to develop a powerful dynamic relationship with the patient. This relationship itself is useful in the therapeutic process and has been called "The drug: doctor."

The therapeutic alliance thus built serves as the bedrock of the practice of humanistic medicine and is the basis on which good physician-patient relationships are built.

This column is contributed by the Public Relations Committee of the Medical and Chirurgical Faculty of Maryland. We encourage readers to share their thoughts and experiences on the subject. Med-Chi, Public Relations, 1211 Cathedral Street, Baltimore, MD 21201; James E. Bell MD, Chairman; Bernard R. Shochet MD, Editor.

PHYSICIAN PLACEMENT SERVICE

The Medical and Chirurgical Faculty of the State of Maryland maintains a Placement Service for the convenience of Maryland physicians, hospitals and communities in search of candidates for positions available in our state. A detailed description of such opportunities should be forwarded to the Physician Placement Service, 1211 Cathedral St., Baltimore, MD 21201; telephone 1-301-539-0872.

Physicians wishing to locate in Maryland are invited to submit a resumé to be kept on file with the Physician Placement Service. Candidates are requested to inform the Faculty when they are no longer available for consideration for opportunities which might be available in Maryland.

Journal announcements on the Classified Advertising page for Physician Placement Service are charged at the regular Classified Advertising rate.

The Body and Its Mind

JACOB H. CONN MD

Every physician is taught that there is a pathological process for every bodily disorder. Patients who present minimal or no evidence of physical disturbance are labeled as being neurotic. This system of nomenclature was derived from the nineteenth century neuron hypothesis. According to that hypothesis, a neurosis was a disease of the neuron, a psychosis was defined as a disorder of the psyche, and a psychoneurosis was a disturbance of both psyche and neuron. The diagnosis of nervousness implied tissue irritability, and neurasthenia referred to an underlying irritable weakness. Some degree of clarification was achieved by pragmatists such as William James, John Dewey, and Adolf Meyer, who could think of a person only as being an indivisible, integrated unit, as they had never seen a body walk in without a mind or a mind float in without a body.

Critics of psychiatry have asserted that psychiatric illness are myths because they do not manifest physical signs.[1] But Magnetic Resonance Imaging has revealed pathologic findings in schizophrenia,[2] and biochemical studies have demonstrated differences in the type and amount of neurotransmitters in various psychoses. When panic disorders are investigated with Positron Emission Tomography, the results indicate an abnormal blood flow, an abnormal oxygen metabolism, and an abnormal susceptibility to episodes of hyperventilation.[3]

Moreover, Roland and Friburg have deduced that it takes as much as energy to image something as to actually see it. They also have demonstrated that recalling a memory is as physiological as is visualizing the original scene, by localizing the areas activated by thinking.[4]

The intimate relationship between language (symbolism) and physiology can be observed in the markedly different effect on the reader of a telegram when only one letter is changed. The telegram may read either "*Your* son" or "*our* son has been killed in action." The difference in meaning and response to the former conveys a cold, businesslike message from the War Department that can be devastating and even life threatening, while the latter conveys a sympathetic commonality of sorrow. Clearly, to consider the terms "functional" and "organic" as being totally different and separate is to remain scientifically naive and anachronistic. These terms can only be considered as being equipollents in regard to their significant effects.

The brain does not think; only a person can think. The pattern of "interaction" is not between physiological processes and psychological processes but among physiological processes, total organism, and psychological processes. Thinking (which Buddha called the sixth sense) is a particular kind of behavior helped by symbolization. it is a prelude to decision and action and, therefore, involves interest, value, and affect. Even memory is a creative blending of fact and fiction that is adjusted to one's needs. Neurological processes do not produce concepts, and thinking cannot make muscles contract. Only in the integrated person, the total organism, can both occur.

Committee on Emotional Health, Gary W. Nyman MD, Chairman; Lino Covi MD, Editor.

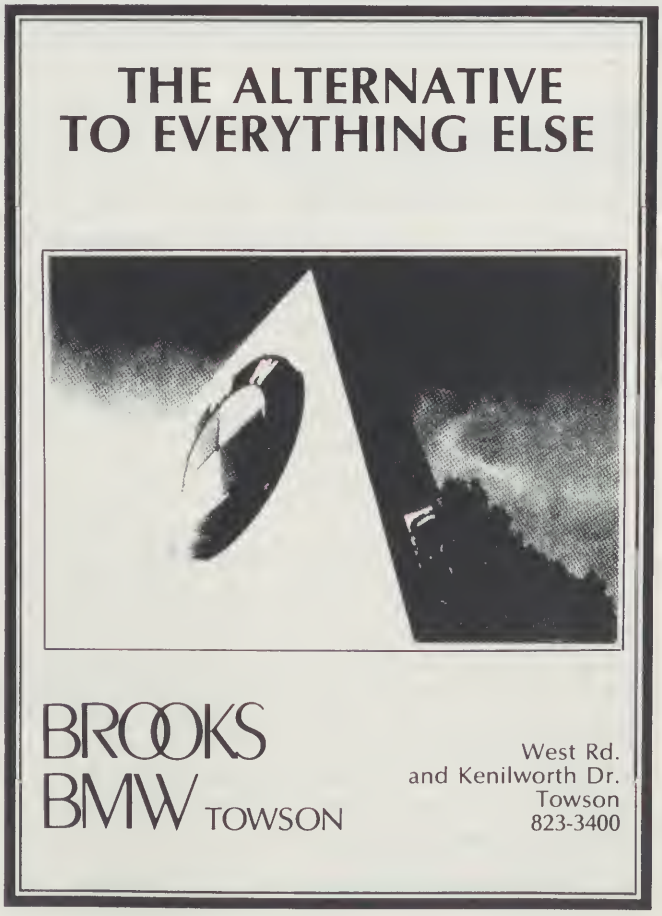
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Medical Miscellany

Restoration Award: Davidge Hall

The Medical Alumni Association of the University of Maryland at Baltimore received a commendation award from the Society for the Preservation of Maryland Antiquities at its 55th annual meeting last November. The award recognizes the restoration of Davidge Hall, the oldest building in the U.S. used continuously for medical education.

Located on the northeast corner of Lombard and Greene Streets, Davidge Hall, built in 1812, is an imposing domed structure with two huge circular theaters one on top of the other. In 1979 the Medical Alumni Association restored the building, which now houses the offices of the association and the UMAB Chancellor as well as a museum. The building's Chemical Hall is the site of lectures, meetings, and seminars.

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Photo Contest: 1987

Med-Chi's Annual Photo Contest is once again in progress. All members of the Faculty and its Auxiliary (except professional photographers) are invited to enter an original photo for this year's judging.

An exhibit of all competing photos will be on display at the 1987 Annual Meeting, April 29 through May 1. Contest winners will be announced at the House of Delegates meeting. Prizes will be awarded the first and second place winners in both the black & white and color categories.

To be included in this year judging, photos must be mailed or brought to the Medical and Chirurgical Faculty office at 1211 Cathedral Street, Baltimore, MD 21201 by 5 p.m. on **Thursday, April 16, 1987**. Photos WILL NOT be returned by mail but may be claimed at the exhibit area on the morning of **Friday, May 1**. Any photos not collected at that time will be available at the Faculty office thereafter.

Full contest rules may be found elsewhere in this issue. Anyone needing more information may contact Nina Casey at Med-Chi (in Baltimore, 539-0872 or, toll-free in Maryland, 1-800-492-1056).

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Biology of Panic Disorder

The Anxiety Disorders Clinic of the Johns Hopkins Hospital is conducting several studies examining the biology of panic disorder and its response to treatment. Studies include the examination of changes occurring during a panic attack (computerized EEG and studies of brain metabolism using the PET scanner), as well as the effects of time limited (9 weeks) treatment with medication and psychotherapy. Participants who complete one of the studies will be entitled to 8 weeks of free treatment. Please refer interested persons to Dr. Rudolf Hoehn-Saric or Cheryl Conrad at 301-955-6111.

New Family Practice Department at Maryland General Hospital

Maryland General Hospital commemorated the opening of a new Department of Family Medicine. On hand for the event were Richard C. Inskip MD, President of the American Academy of Family Physicians; Edward N. Brandt MD, Chancellor of the University of Maryland at Baltimore; Louis O. Olsen MD, President of the Maryland Academy of Family Physicians and Active Chief of Maryland General Hospital's new Department of Family Medicine; J. R. Wood, President of Maryland General Hospital, and Salvatore R. Donohue MD, Senior Vice-President for Medical Affairs at Maryland General.

"With the new Department of Family Medicine, admitting privileges will be broadened to allow more family physicians to participate," said Dr. Olsen.



Pictured for the ribbon-cutting are (from left): Judy Inskip; Richard C. Inskip MD, President of the American Academy of Family Physicians; Louis O. Olsen MD; Edward Kowalewski MD, Professor and Chairman of the Department of Family Medicine, U. of Md. Hospital; J. R. Wood, MGH President; C. Earl Hill MD, Associate Professor of the Department of Family Medicine, U. of Md. Hospital; and David Zajano MD, Department of Family Practice, Franklin Square Hospital.

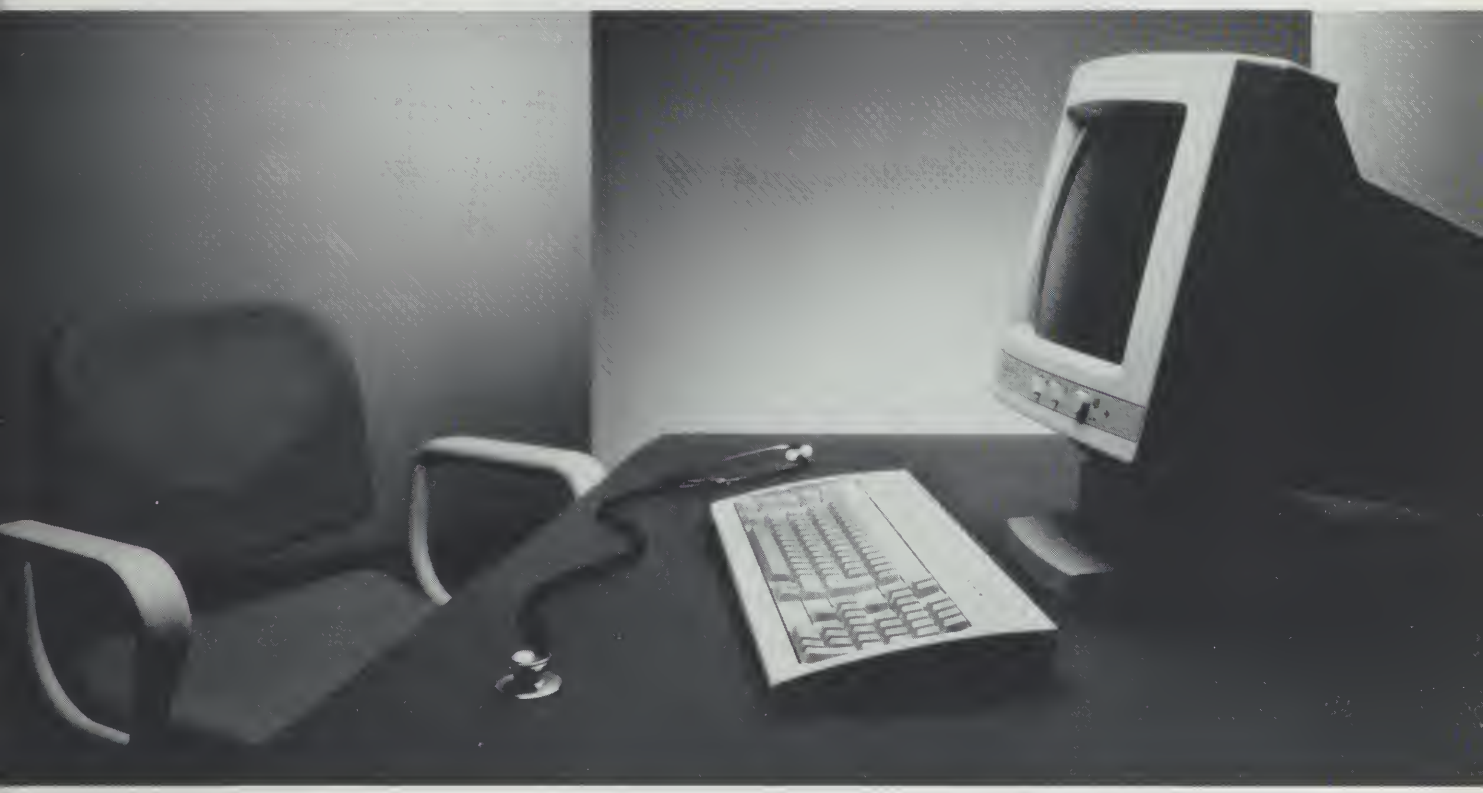
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Educational Materials: Porphyria

The American Porphyria Foundation will provide primary care physicians with excellent educational materials for diagnosis, testing, and treatment of each of the porphyrias. For further information:

American Porphyria Foundation
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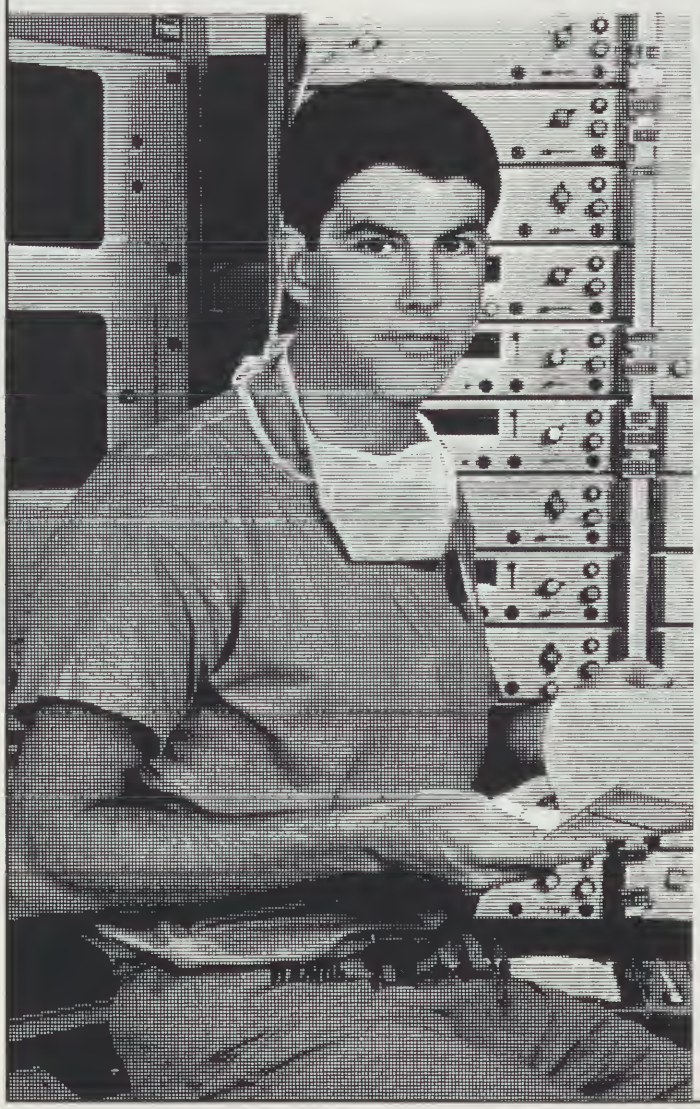
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* **WARNING**

This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

Contraindications: Concomitant use with other potassium-sparing agents such as spironolactone or amiloride. Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: **Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired.** If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K^+ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K^+ intake. **Associated widened QRS complex or arrhythmia requires prompt additional therapy.** Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available. Sensitivity reactions may occur in patients with or without a history of allergy or bronchial asthma. Possible exacerbation or activation of systemic lupus erythematosus has been reported with thiazide diuretics.

Precautions: The bioavailability of the hydrochlorothiazide component of 'Dyazide' is about 50% of the bioavailability of the single entity. Theoretically, a patient transferred from the single entities of triamterene and hydrochlorothiazide may show an increase in blood pressure or fluid retention. Similarly, it is also possible that the lesser hydrochlorothiazide bioavailability could lead to increased serum potassium levels. However, extensive clinical experience with 'Dyazide' suggests that these conditions have not been commonly observed in clinical practice. Angiotensin-converting enzyme (ACE) inhibitors can elevate serum potassium; use with caution with 'Dyazide'. Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids, and during concurrent use with amphotericin B or corticosteroids or corticotropin [ACTH]). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Cumulative effects of the drug may develop in patients with impaired renal function. Thiazides should be used with caution in patients with impaired hepatic function. They can precipitate coma in patients with severe liver disease. Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic and hemolytic anemia have been reported with thiazides. Thiazides may cause manifestation of latent diabetes mellitus. The effects of oral anticoagulants may be decreased when used concurrently with hydrochlorothiazide; dosage adjustments may be necessary. Clinically insignificant reductions in arterial responsiveness to norepinephrine have been reported. Thiazides have also been shown to increase the paralyzing effect of nondepolarizing muscle relaxants such as tubocurarine. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. Triamterene has been found in renal stones in association with the other usual calculus components. Therefore, 'Dyazide' should be used with caution in patients with histories of stone formation. A few occurrences of acute renal failure have been reported in patients on 'Dyazide' when treated with indomethacin. Therefore, caution is advised in administering nonsteroidal anti-inflammatory agents with 'Dyazide'. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine. Hypokalemia is uncommon with 'Dyazide', but should it develop, corrective measures should be taken such as potassium supplementation or increased dietary intake of potassium-rich foods. Corrective measures should be instituted cautiously and serum potassium levels determined. Discontinue corrective measures and 'Dyazide' should laboratory values reveal elevated serum potassium. Chloride deficit may occur as well as dilutional hyponatremia. Concurrent use with chlorpropamide may increase the risk of severe hyponatremia. Serum PBI levels may decrease without signs of thyroid disturbance. Calcium excretion is decreased by thiazides. 'Dyazide' should be withdrawn before conducting tests for parathyroid function. Thiazides may add to or potentiate the action of other antihypertensive drugs. Diuretics reduce renal clearance of lithium and increase the risk of lithium toxicity.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances; postural hypotension (may be aggravated by alcohol, barbiturates, or narcotics). Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and respiratory distress including pneumonitis and pulmonary edema, transient blurred vision, sialadenitis, and vertigo have occurred with thiazides alone. Triamterene has been found in renal stones in association with other usual calculus components. Rare incidents of acute interstitial nephritis have been reported. Impotence has been reported in a few patients on 'Dyazide', although a causal relationship has not been established.

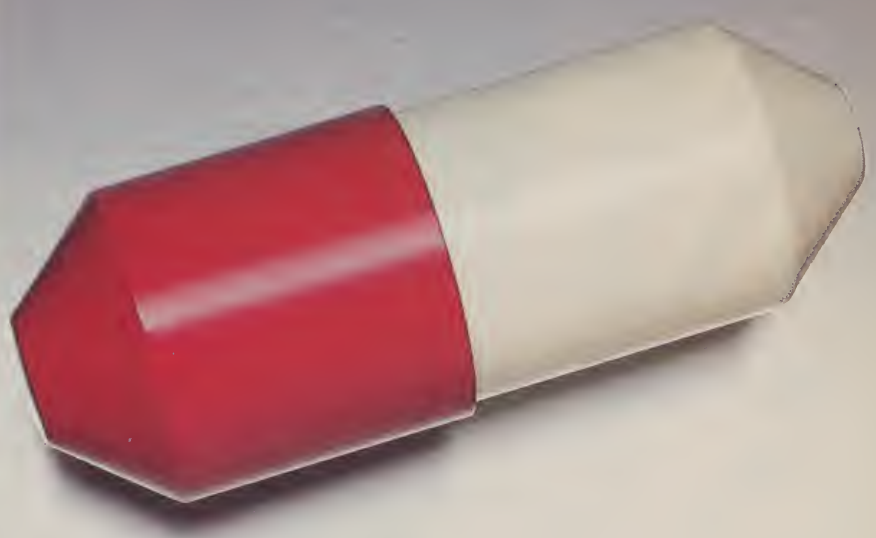
Supplied: **'Dyazide' is supplied as a red and white capsule, in bottles of 1000 capsules; Single Unit Packages (unit-dose) of 100 (intended for institutional use only); in Patient-Pak™ unit-of-use bottles of 100.**

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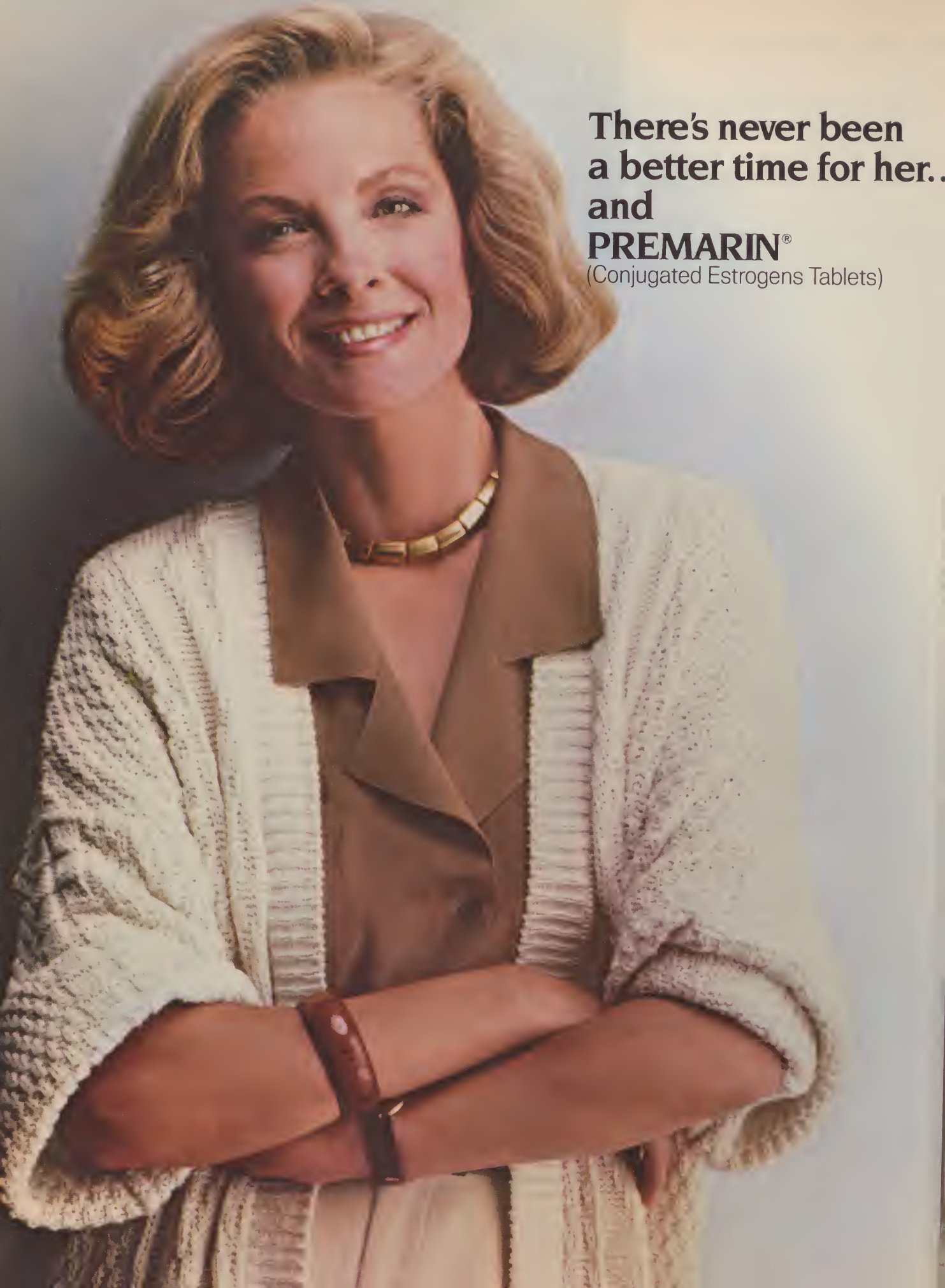


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Effect on lipids—an important feature

PREMARIN used alone does not adversely affect lipid levels. In fact, a clinical study has shown a significant increase in HDL cholesterol—from 49.7 mg/dL to 56.4 mg/dL—and decrease in LDL cholesterol—from 165.1 mg/dL to 138.1 mg/dL—after one year of therapy with PREMARIN, 0.625 mg.[5]

Low-dose control of menopausal symptoms*

PREMARIN effectively relieves vasomotor symptoms, such as hot flashes. When estrogen deficiency is limited to atrophic vaginitis, PREMARIN® (conjugated estrogens) Vaginal Cream restores the vaginal environment to its premenopausal state.

The most widely used, most extensively studied estrogen worldwide.

PREMARIN®
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Most trusted for more reasons

*PREMARIN is indicated for moderate-to-severe vasomotor symptoms.

Please see following page for brief summary of prescribing information.

For moderate-to-severe vasomotor symptoms

PREMARIN®
(Conjugated Estrogens Tablets)



0.3 mg 0.625 mg 0.9 mg 1.25 mg 2.5 mg

The appearance of these tablets is a trademark of Ayerst Laboratories.

For atrophic vaginitis

PREMARIN®
(Conjugated Estrogens)

Vaginal Cream

0.625mg/g



BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION AND PATIENT INFORMATION, SEE PACKAGE CIRCULARS.)*

PREMARIN® Brand of conjugated estrogens tablets, USP
PREMARIN® Brand of conjugated estrogens Vaginal Cream In a nonliquefying base

1. ESTRDGENS HAVE BEEN REPDRTED TO INCREASE THE RISK DF ENDOMETRIAL CARCINDMA.

Three independent case control studies have reported an increased risk of endometrial cancer in postmenopausal women exposed to exogenous estrogens for more than one year. This risk was independent of the other known risk factors for endometrial cancer. These studies are further supported by the finding that incidence rates of endometrial cancer have increased sharply since 1969 in eight different areas of the United States with population-based cancer reporting systems, an increase which may be related to the rapidly expanding use of estrogens during the last decade. The three case control studies reported that the risk of endometrial cancer in estrogen users was about 4.5 to 13.9 times greater than in nonusers. The risk appears to depend on both duration of treatment and on estrogen dose. In view of these findings, when estrogens are used for the treatment of menopausal symptoms, the lowest dose that will control symptoms should be utilized and medication should be discontinued as soon as possible. When prolonged treatment is medically indicated, the patient should be reassessed on at least a semiannual basis to determine the need for continued therapy. Although the evidence must be considered preliminary, one study suggests that cyclic administration of low doses of estrogen may carry less risk than continuous administration; it therefore appears prudent to utilize such a regimen. Close clinical surveillance of all women taking estrogens is important. In all cases of undiagnosed persistent or recurring abnormal vaginal bleeding, adequate diagnostic measures should be undertaken to rule out malignancy. There is no evidence at present that "natural" estrogens are more or less hazardous than "synthetic" estrogens at equiestrogenic doses.
2. ESTROGENS SHOULD NDT BE USED DURING PREGNANCY.
The use of female sex hormones, both estrogens and progestogens, during early pregnancy may seriously damage the offspring. It has been shown that females exposed in utero to diethylstilbestrol, a non-steroidal estrogen, have an increased risk of developing in later life a form of vaginal or cervical cancer that is ordinarily extremely rare. This risk has been estimated as not greater than 4 per 1,000 exposures. Furthermore, a high percentage of such exposed women (from 30% to 90%) have been found to have vaginal adenosis, epithelial changes of the vagina and cervix. Although these changes are histologically benign, it is not known whether they are precursors of malignancy. Although similar data are not available with the use of other estrogens, it cannot be presumed they would not induce similar changes. Several reports suggest an association between intrauterine exposure to female sex hormones and congenital anomalies, including congenital heart defects and limb reduction defects. One case control study estimated a 4.7-fold increased risk of limb reduction defects in infants exposed in utero to sex hormones (oral contraceptives, hormone withdrawal tests for pregnancy, or attempted treatment for threatened abortion). Some of these exposures were very short and involved only a few days of treatment. The data suggest that the risk of limb reduction defects in exposed fetuses is somewhat less than 1 per 1,000. In the past, female sex hormones have been used during pregnancy in an attempt to treat threatened or habitual abortion. There is considerable evidence that estrogens are ineffective for these indications, and there is no evidence from well controlled studies that progestogens are effective for these uses. If PREMARIN is used during pregnancy, or if the patient becomes pregnant while taking this drug, she should be apprised of the potential risks to the fetus, and the advisability of pregnancy continuation.

DESCRIPTION: PREMARIN (conjugated estrogens, USP) contains a mixture of estrogens, obtained exclusively from natural sources, blended to represent the average composition of material derived from pregnant mares' urine. It contains estrone, equilin, and 17α-dihydroequilin, together with smaller amounts of 17α-estradiol, equilenin, and 17α-dihydroequilenin as salts of their sulfate esters. Tablets are available in 0.3 mg, 0.625 mg, 0.9 mg, 1.25 mg, and 2.5 mg strengths of conjugated estrogens. Cream is available as 0.625 mg conjugated estrogens per gram.

INDICATIONS AND USAGE: PREMARIN (conjugated estrogens tablets, USP): Moderate-to-severe *vasomotor* symptoms associated with the menopause. (There is no evidence that estrogens are effective for nervous symptoms or depression without associated vasomotor symptoms and they should not be used to treat such conditions.) **Osteoporosis (abnormally low bone mass).** Atrophic vaginitis. Kraurosis vulvae. Female castration.

PREMARIN (conjugated estrogens) Vaginal Cream is indicated in the treatment of atrophic vaginitis and kraurosis vulvae. PREMARIN HAS NOT BEEN SHDWN TD BE EFFECTIVE FDR ANY PURPDSE DURING PREGNANCY AND ITS USE MAY CAUSE SEVERE HARM TO THE FETUS (SEE BDXED WARNING).

Concomitant Progestin Use: The lowest effective dose appropriate for the specific indication should be utilized. Studies of the addition of a progestin for 7 or more days of a cycle of estrogen administration have reported a lowered incidence of endometrial hyperplasia. Morphological and biochemical studies of the endometrium suggest that 10 to 13 days of progestin are needed to provide maximal maturation of the endometrium and to eliminate any hyperplastic changes. Whether this will provide protection from endometrial carcinoma has not been clearly established. There are possible additional risks which may be associated with the inclusion of progestin in estrogen replacement regimens. (See PRECAUTIONS.) The choice of progestin and dosage may be important; product labeling should be reviewed to minimize possible adverse effects.

CONTRAINDICATIONS: Estrogens should not be used in women (or men) with any of the following conditions: 1. Known or suspected cancer of the breast except in appropriately selected patients being treated for metastatic disease. 2. Known or suspected estrogen-dependent neoplasia. 3. Known or suspected pregnancy (See Boxed Warning). 4. Undiagnosed abnormal genital bleeding. 5. Active thrombophlebitis or thromboembolic disorders. 6. A past history of thrombophlebitis, thrombosis, or thromboembolic disorders associated with previous estrogen use (except when used in treatment of breast or prostatic malignancy).

WARNINGS: Long-term continuous administration of natural and synthetic estrogens in certain animal species increases the frequency of carcinomas of the breast, cervix, vagina, and liver. There are now reports that estrogens increase the risk of carcinoma of the endometrium in humans. (See Boxed Warning.) At the present time there is no satisfactory evidence that estrogens given to postmenopausal women increase the risk of cancer of the breast, although a recent study has raised this possibility. There is a need for caution in prescribing estrogens for women with a strong family history of breast cancer or who have breast nodules, fibrocystic disease, or abnormal mammograms. A recent study has reported a 2- to 3-fold increase in the risk of surgically confirmed gallbladder disease in women receiving postmenopausal estrogens.

Adverse effects of oral contraceptives may be expected at the larger doses of estrogen used to treat prostatic or breast cancer or postpartum breast engorgement; it has been shown that there is an increased risk of thrombosis in men receiving estrogens for prostatic cancer and women for postpartum breast engorgement. Users of oral contraceptives have an increased risk of diseases, such as thrombophlebitis, pulmonary embolism, stroke, and myocardial infarction. Cases of retinal thrombosis, mesenteric thrombosis, and optic neuritis have been reported in oral contraceptive users. An increased risk of postsurgery thromboembolic complications has also been reported in users of oral contraceptives. If feasible, estrogen should be discontinued at least 4 weeks before surgery of the type associated with an increased risk of thromboembolism, or during periods of prolonged immobilization. Estrogens should not be used in persons with active thrombophlebitis, thromboembolic disorders, or in persons with a history of such disorders in association with estrogen use. They should be used with caution in patients with cerebral vascular or coronary artery disease. Large doses (5 mg conjugated estrogens per day), comparable to those used to treat cancer of the prostate and breast, have been shown to increase the risk of nonfatal myocardial infarction, pulmonary embolism and thrombophlebitis. When doses of this size are used, any of the thromboembolic and thrombotic adverse effects should be considered a clear risk.

Benign hepatic adenomas should be considered in estrogen users having abdominal pain and tenderness, abdominal mass, or hypovolemic shock. Hepatocellular carcinoma has been reported in women taking estrogen-containing oral contraceptives. Increased blood pressure may occur with use of estrogens in the menopause and blood pressure should be monitored with estrogen use. A worsening of glucose tolerance has been observed in patients on estrogen-containing oral contraceptives. For this reason, diabetic patients should be carefully observed. Estrogens may lead to severe hypercalcemia in patients with breast cancer and bone metastases.

PRECAUTIONS: Physical examination and a complete medical and family history should be taken prior to the initiation of any estrogen therapy with special reference to blood pressure, breasts, abdomen, and pelvic organs, and should include a Papanicolaou smear. As a general rule, estrogen should not be prescribed for longer than one year without another physical examination being performed. Conditions influenced by fluid retention such as asthma, epilepsy, migraine, and cardiac or renal dysfunction, require careful observation. Certain patients may develop manifestations of excessive estrogenic stimulation, such as abnormal or excessive uterine bleeding, mastodynia, etc. Prolonged administration of unopposed estrogen therapy has been reported to increase the risk of endometrial hyperplasia in some patients. Oral contraceptives appear to be associated with an increased incidence of mental depression. Patients with a history of depression should be carefully observed. Preexisting uterine leiomyomata may increase in size during estrogen use. The pathologist should be advised of estrogen therapy when relevant specimens are submitted. If jaundice develops in any patient receiving estrogen, the medication should be discontinued while the cause is investigated. Estrogens should be used with care in patients with impaired liver function, renal insufficiency, metabolic bone diseases associated with hypercalcemia, or in young patients in whom bone growth is not complete. If concomitant progestin therapy is used, potential risks may include adverse effects on carbohydrate and lipid metabolism.

The following changes may be expected with larger doses of estrogen:

a. Increased sulfobromophthalein retention.

b. Increased prothrombin and factors VII, VIII, IX, and X; decreased antithrombin 3; increased norepinephrine-induced platelet aggregability.

c. Increased thyroid binding globulin (TBG) leading to increased circulating total thyroid hormone, as measured by PBI, T4 by column, or T4 by radioimmunoassay. Free T3 resin uptake is decreased, reflecting the elevated TBG; free T4 concentration is unaltered.

d. Impaired glucose tolerance.

e. Decreased pregnanediol excretion.

f. Reduced response to metyrapone test.

g. Reduced serum folate concentration.

h. Increased serum triglyceride and phospholipid concentration. As a general principle, the administration of any drug to nursing mothers should be done only when clearly necessary since many drugs are excreted in human milk.

ADVERSE REACTIONS: The following have been reported with estrogenic therapy, including oral contraceptives: breakthrough bleeding, spotting, change in menstrual flow; dysmenorrhea; premenstrual-like syndrome; amenorrhea during and after treatment; increase in size of uterine fibromyomata; vaginal candidiasis, change in cervical erosion and in degree of cervical secretion; cystitis-like syndrome; tenderness, enlargement, secretion (of breasts); nausea, vomiting, abdominal cramps, bloating; cholestatic jaundice; chloasma or melasma which may persist when drug is discontinued; erythema multiforme; erythema nodosum; hemorrhagic eruption; loss of scalp hair; hirsutism; steepening of corneal curvature; intolerance to contact lenses; headache, migraine, dizziness, mental depression, chorea; increase or decrease in weight; reduced carbohydrate tolerance; aggravation of porphyria; edema; changes in libido.

ACUTE OVERDDSAGE: May cause nausea, and withdrawal bleeding may occur in females.

DOSAGE AND ADMINISTRATIDN:

PREMARIN® Brand of conjugated estrogens tablets, USP

1. *Given cyclically for short-term use only.* For treatment of moderate to severe *vasomotor* symptoms, atrophic vaginitis, or kraurosis vulvae associated with the menopause (0.3 to 1.25 mg or more daily). The lowest dose that will control symptoms should be chosen and medication should be discontinued as promptly as possible. Administration should be cyclic (eg, three weeks on and one week off). Attempts to discontinue or taper medication should be made at three- to six-month intervals.
2. *Given cyclically:* Female castration. Osteoporosis. Female castration—1.25 mg daily, cyclically. Adjust upward or downward according to response of the patient. For maintenance, adjust dosage to lowest level that will provide effective control. Osteoporosis —0.625 mg daily. Administration should be cyclic (eg, three weeks on and one week off).

Patients with an intact uterus should be monitored for signs of endometrial cancer and appropriate measures taken to rule out malignancy in the event of persistent or recurring abnormal vaginal bleeding.

PREMARIN® Brand of conjugated estrogens Vaginal Cream

Given cyclically for short-term use only. For treatment of atrophic vaginitis or kraurosis vulvae.

The lowest dose that will control symptoms should be chosen and medication should be discontinued as promptly as possible.

Administration should be cyclic (eg, three weeks on and one week off).

Attempts to discontinue or taper medication should be made at three-to-six month intervals.

Usual dosage range: 2 to 4 g daily, intravaginally, depending on the severity of the condition.

Treated patients with an intact uterus should be monitored closely for signs of endometrial cancer and appropriate diagnostic measures should be taken to rule out malignancy in the event of persistent or recurring abnormal vaginal bleeding

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Maurice C. Pincoffs MD: Clinician and Teacher, Medical Statesman, and Distinguished Soldier

THEODORE E. WOODWARD MD

The medical profession will remember Maurice C. Pincoffs as one of Maryland's foremost medical teachers, clinicians, counselors, and medical administrators. His mind and his labors were shaped by and helped shape an era of almost ceaseless medical progress.

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Maryland enjoys a rich heritage in medicine. Maurice C. Pincoffs stands in the line of succession with men like Samuel C. Chew, William Osler, William Welch, Charles Austrian, Arthur Shipley, Thomas Boggs, Walter Baetjer, Louis Krause, and others. His colleagues, his students, and his patients looked to him for leadership, and he never disappointed them.

Maurice C. Pincoffs, known to his intimates as "Pink," was born in Chicago, Illinois, on August 6, 1886. His father, for whom he was named, was a native of Rotterdam, Holland, who had come to the United States with his parents in the late 1870s. The family settled in Chicago and established an export business. Mr. Pincoffs married Louise Henrotin, the daughter of a Chicago physician, and they had several children. Maurice was the second child and first boy.

For business reasons the Pincoffs lived in Belgium for several years where young Maurice attended school in Antwerp for three years and learned French, which served him well when he was stationed in France during World War I.

Pincoffs entered the University of Chicago in 1904. During one of his years at the university, he lived with his uncle, Dr. Fernand Henrotin. He became active in fraternity affairs and was able to maneuver some of his education during winter months at an affiliated institution in Florida. In 1906, when Dr. Henrotin died, he left his favorite nephew a small legacy. This prompted Pincoffs, against his father's wishes, to temporarily arrest his formal education. In 1907, Pincoffs and a college friend, Horace B. (Tod) Horton, traveled throughout the west.

Resuming his education, Pincoffs attended Rush Medical College in Chicago from 1906 to 1909. The first year at Rush was marked by a near-catastrophic event not uncommon for medical students. Pincoffs's proneness to diversion had not fully dissipated when the Delta Kappa Epsilon fraternity chose him as its representative to its national convention in New York City. The meeting conflicted with the mid-term examination, absence from which was tantamount to failing the course. This usually meant release from medical school. It was suggested to Pincoffs that another profession might better suit his tastes. The predicament stimulated Pincoffs to study day and night to obtain a favorable report at the end of the semester.

In 1909, Pincoffs completed requirements for the baccalaureate degree in science and graduated from the University of Chicago. He enrolled as a graduate student at the University of Chicago for a year and worked in the Department of Anatomy, headed by Professor R. R. Bensley. He seriously considered a career in medical science but, in the end, decided to enter Johns Hopkins Medical School. Professor Bensley had a high opinion of his graduate student and wrote a very enthusiastic letter to Franklin P. Mall MD, Professor of Anatomy at Hopkins, recommending that Pincoffs be admitted to Johns Hopkins Medical School with advanced standing because of his strong background. An endorsement to Dr. William H. Welch stressed that Pincoffs showed unique promise of an outstanding career in medicine. He was admitted to Hopkins as a third-year student and began his training in October 1910.

Medical School

From the beginning, Pincoffs was regarded as a promising student who quickly adapted to his new medical setting. In his senior year at Hopkins, another close call occurred in Pincoffs's academic career. After Christmas vacation, he went north to New York City and Bellevue Hospital for a month's student externship in surgery. During this unauthorized absence, he missed an important examination in surgery held at Hopkins. This prompted a Hopkins professor to suggest to Pincoffs that he think seriously about another professional career. An interview with Dr. William S. Halsted, Chairman of Surgery, helped clear the situation. This unscheduled detour ended happily in 1912 with Pincoffs's graduation from Hopkins with a degree of Doctor of Medicine.

His request for an internship at the Johns Hopkins Hospital was denied because of certain conflicting details regarding his grades as a student at Rush Medical College. Fittingly, he obtained an internship at the Presbyterian Hospital in Chicago and trained on the service of Dr. James B. Herrick, a distinguished clinician and cardiologist, from 1912 to 1913.

Dr. Pincoffs returned to Baltimore for training as Assistant Resident Physician at the City Hospitals, then known as Bay View. The Bay View Hospital had undergone considerable transformation. In addition to the main hospital or infirmary (which housed chronic patients) and buildings for the care of tuberculosis patients and the mentally ill, a new facility permitted



Figure 1. Maurice C. Pincoffs as a senior medical student at the Johns Hopkins Medical School.

care of medical and surgical cases with acute illnesses.

For two years, Dr. Pincoffs was Medical Resident on the newly organized medical service under direction of Dr. Thomas H. Boggs, a senior member of the Hopkins medical faculty. Dr. Walter Baetjer was the Resident Physician. During this time, the surgical service was organized under the aegis of Dr. Arthur M. Shipley of the University of Maryland faculty. Drs. Boggs and Shipley were able and enthusiastic clinicians whose work, beginning in 1910 at the Baltimore City Hospitals, was instrumental in improving the standards of medical care and teaching. Dr. Pincoffs served as Assistant Resident Physician in 1913 and Resident Physician in 1914. Drs. Pincoffs and Shipley, two dedicated clinician-teachers, began an association that continued until mid-century.

A major attraction at Bay View was the excellent academic program in pathology under the distinguished leadership and stimulus of Dr. William Welch. He and Dr. Milton C. Winternitz devoted much time to postmortem examination and to instruction of resident physicians. Surgeons and physicians in residence shouldered most of the hospital work. "Pete" Toulson and Maurice Pincoffs were residents on the surgical and medical services, respectively, from 1914 to 1915.

Much to the advantage of medicine in Baltimore, the medical and surgical services at Bay View were shared congenially all those years by Hopkins and Maryland.

Practice

In 1915, Dr. Pincoffs left Bay View to join Dr. Lewellys F. Barker as an associate in private medical practice, an association that brought him into intimate contact with Drs. Walter A. Baetjer, Thomas Sprunt, and Henry M. Thomas, also clinical associates in that office. Dr. Pincoffs did not abandon his scientific medicine. When he entered private medical practice, he devoted mornings to work on endocrine problems under Drs. John J. Abel and David Macht of the Department of Pharmacology of the Hopkins School of Medicine. There Dr. Pincoffs attempted to isolate the canine hormone, secretin, from the intestinal tract. His interest in epinephrine was kindled and would surface later.

After a training course for medical officers at Plattsburg in the summer of 1916, Dr. Pincoffs became a First Lieutenant in the Medical Corps of the United States Army. His medical practice and clinical interests in research came to an abrupt halt when he volunteered for service and was called to active duty in the spring of 1917. He was sent to France with a large group of American medical officers assigned to the British Expeditionary Force at the request of the British government. Soon after reaching France, Dr. Pincoffs joined

the British sector of the Allies as a battalion medical officer. He gained valuable experience in evacuation of the wounded and displayed indomitable courage under battle conditions.

Later, Dr. Pincoffs was transferred to Second Division of the American Expeditionary Forces. Lt. Col. Richard Derby, Surgeon of the Second Division, highly praised Lt. Pincoffs for his courage and ability as a battalion surgeon.

> Lieutenant Maurice Pincoffs was the ideal of all that a medical officer should be. Absolutely fearless, full of resources and a born leader, he was ever accomplishing what appeared impossible and in so doing maintained at a high pitch the morale of those about him. The system of location of battalion aid stations and use of the litter bearer section of the ambulance companies, which was used in the open fighting of the summer, was developed by Lieutenant Pincoffs, and to him is due much of the credit for the rapid evacuation of the battlefield which characterized the later engagements of the division.

The French government awarded him the Croix De Guerre with palm and two stars; the United States awarded him the Distinguished Service Cross: two very high honors for valor in action. Dr. Pincoffs left the Army with the rank of Captain.

In 1919, Dr. Pincoffs returned to Baltimore and resumed his association with Dr. Barker. He joined the Hopkins staff as a part-time Instructor in Clinical Medicine with responsibilities in medical practice and teaching in the Johns Hopkins Dispensary.

That same year, he married Katherine B. Randall, eldest daughter of Mr. and Mrs. Blanchard Randall of Baltimore. Dr. Pincoffs and Katherine had met in Canada during the summer of 1915. In 1920, Dr. and Mrs. Pincoffs moved to Markland, their large, lovely home on twelve acres on a high hill just off Frederick Road, not far from the Randall estate. In this rural setting, their children, Maurice Charles, Jr., Susan Randall, and Peter Henrotin, were raised.

Dr. Pincoffs's career seemed aimed toward private medical practice and part-time teaching on the Hopkins medical staff until fate intervened. Conversations with Drs. Baetjer, Shipley, Toulson, and McLean clarified the following series of events. Gordon Wilson MD, who held the Chair of Medicine at Maryland from 1913 to 1922, had been ill after contracting pulmonary tuberculosis.

Arthur M. Shipley MD was then the dominant medical force at the University of Maryland School of Medicine and Hospital. Dr. Shipley had developed a strong professional and personal relationship with Dr. Wilson. In those days, faculty meetings were few, and decisions often were made in "good faith" by those in authority. Having heard of the splendid talents of Dr. Walter Baetjer, Dr. Shipley instructed Gordon Wilson



Figure 2. Lt. Pincoffs MC (right) in France. He was then serving with distinction as a Battalion Medical Officer with the Second Division.



Figure 3. The Pincoffs family at Markland. Dr. and Mrs. Pincoffs, Maurice C. Jr. (standing), Susan, and Peter.



Figure 4. Dr. Pincoffs about the time he assumed the Chair of Medicine at the University of Maryland School of Medicine in 1922.

to seek Dr. Barker's approval to approach his associate as a candidate for the Chair of Medicine. Dr. Baetjer appreciated the offer but graciously declined because he preferred medical practice to medical teaching and administrative responsibilities. Dr. Baetjer suggested Dr. Pincoffs as a good candidate. Dr. Wilson discussed the matter further with Dr. Shipley, who instructed him to return to the Barker office and to offer the post to Dr. Pincoffs.

University Administrator

After Pincoffs's appointment, a meeting was held at the home of W. F. Lockwood MD, former Dean of the College of Physicians and Surgeons. Those in attendance with Lockwood were Drs. Harvey Deck, Dennis McCleary, Charles Judd, and George McLean, who recorded the minutes. Dr. Pincoffs, then age 35, attended this special meeting and was asked to present his concepts of the medical program and how the College of Physicians (Mercy Hospital) staff would relate to the department's program. Among other things, Dr. Pincoffs suggested the adoption of a new form to record patients' medical histories and doctors' physical findings. The form was approved and ultimately adopted but later was discarded in favor of the standard clinical format.

In 1921, Dr. Pincoffs resigned his post at Hopkins and his practice with Dr. Barker to become Professor of Medicine at the University of Maryland School of Medicine and Hospital and to begin his unstinting commitment to the task of fulfilling new, arduous duties as chairman of a large clinical department. Although the budget was meager and the resources and facilities limited, Dr. Pincoffs had a competent cadre of practitioners and clinical teachers available to him.

The medical school was undergoing considerable change that culminated in a crisis affecting the future of the school and hospital. In 1920, Dr. Wilson had convinced local and state authorities that the school had a promising future and was sorely needed by the city and state. The University of Maryland had absorbed the Baltimore Medical College (Maryland General Hospital) in 1913 and the College of Physicians and Surgeons (Mercy Hospital) in 1915. The amalgamation brought together older, more established faculty members who had held important and prestigious posts in their respective institutions. The new group represented three medical schools molded into one.

When Dr. Pincoffs came on this scene as Chairman of the Department of Medicine, there was a competent Department of Surgery under the direction of Arthur M. Shipley. Despite some difficulties, mostly relating to claims of territorial responsibility and resistance to change in the Department, Dr. Pincoffs's chairmanship proceeded well. He developed a strong clinical teaching department that became the backbone of the school and hospital. At Mercy Hospital, he contributed many hours of teaching and service to the staff and patients, providing a solidifying influence between the clinical and teaching strength at the College of Physicians and Surgeons and the newly organized University of Maryland Department of Medicine.

During Dr. Pincoffs's tenure as Chairman (1922 to 1954), the country was experiencing extensive scientific discoveries and developments. Pincoffs's excellent leadership qualities and skills as a clinician and teacher provided the foundation necessary for organizing and developing a Department of Medicine. By virtue of this influence, other departments at the university adopted Pincoffs' standards and were thereby strengthened. The school was later referred to as "the College of P and S," not meaning "Physicians and Surgeons," but "Pincoffs and Shipley."

An inspiring teacher, Dr. Pincoffs imparted a sense of responsibility and attention to thoroughness to physicians and students privileged to study under him. To

Dr. Pincoffs, a medical diagnosis was never a hasty judgment but a painstaking analysis designed for the clinical problem at hand. These natural assets were strengthened by his unusual ability to retain information gleaned from the medical literature. Even when eating lunch, he often read a medical article or a classic writing.

Dr. Pincoffs became interested in oxygen therapy and its relationship to treatment of critical disorders, such as lobar pneumonia and conditions in which the patient might profit from a highly concentrated atmosphere of oxygen. In the 1930s, he arranged to have three small chambers (resembling a small battleship) constructed on the 2-C wing of the University Hospital. Each chamber had a metal double door, was airtight, and was large enough to accommodate a hospital bed, a nurse, and one or two others. The three-bed unit was supplied by a delicate system of tubes from oxygen tanks at one end. The patient reclined comfortably in an atmosphere of about 100 percent oxygen provided by the tubes. Patients with severe lobar pneumonia, myocardial infarction, and severe trauma with brain injury showed improvement when treated with this forerunner of the hyperbaric chamber. Unfortunately, the apparatus was difficult to operate, and the oxygen costs per patient amounted to $25 a day, a huge sum then. When after a few years the unit ceased to function, the small chambers were used for offices and storage until the area was remodeled in 1955.



Figure 5. Dr. Pincoffs discussing a case during a clinical pathological conference at the Massachusetts General Hospital, Boston.

Teacher

Dr. Pincoffs taught and practiced the principles of comprehensive medicine, emphasizing the ecology of disease. His lectures in Davidge Hall and later in Gordon Wilson Hall in the "new" University Hospital were concise, objective, comprehensive, and delivered in a deep baritone voice in beautifully chosen English.

Having uncanny ability to reach the heart of a difficult clinical problem after the medical history and physical findings of a patient had been appropriately presented, Dr. Pincoffs often probed deeper into the pertinent history and seldom failed to detect a key physical finding of the condition. He placed the patient's problem foremost with unselfish devotion. He was an inspiration to his patients, and they had implicit confidence in his judgment. He expressed sincere interest and concern for his patients' feelings as well as for their pain.

It is not clear why Dr. Pincoffs failed to stimulate and incorporate research methods into the Department of Medicine during his tenure, particularly in view of his intimate association with leaders of many prestigious medical centers. His lack of attention to research was contrary to Dr. Pincoffs's persuasion and experience. On my recruitment, as the first clinical geographic full-time faculty member in 1948, I asked what he expected of me. Dr. Pincoffs replied, "Ted, we need to get going in development of a postgraduate residency training program and in research." It seemed clear that the curriculum needed revision. There was a redundancy of didactic lectures with little practical in-hospital medical experience. Dr. Pincoffs adhered to the creed of high quality patient care within an environment of clinical teaching. Generally, he discouraged house officers and faculty from seeking training and research experience elsewhere.

Because of administrative duties, Dr. Pincoffs sacrificed any opportunity for sustained work in the laboratory except for sporadic brief chances. Nevertheless, the prestige of the school was enhanced through his teaching, clinical studies, and medical write-ups of bedside observations. He wrote many significant medical publications dealing with the natural history of diseases, physiological phenomena related to the adrenal gland and hypertension (case report), functional and

structural abnormalities of the heart, disorders of the nervous system, and management of acute infectious diseases. Dr. Pincoffs presented several important papers to the Association of American Physicians, a prestigious society of which he was a member. In his first formal paper (presented to the Association in 1926) Dr. Pincoffs described the classic features of abscess in the spinal epidural space. In this study and others to follow, he emphasized the need for early diagnosis and prompt surgical intervention. He always maintained an interest in clinical medicine. On the floor of the Association, Dr. Pincoffs entered discussions and made concise remarks based on his painstaking case analyses of patients with cardiovascular syphilis (1927), the association of hydronephrosis and unilateral hypertension (1938), on malaria (1948), and typhoid fever (1949).

Dr. Pincoffs's paper on the relationship between paroxysmal hypertension and pheochromocytoma, presented to the Association in 1929, was the first reported since Mayo's original case in 1927. Since his early interest in adrenalin while at Dr. Abel's laboratory, Dr. Pincoffs had studied a patient who exhibited abnormal excess clinical effects of this hormone. He correctly diagnosed a 25-year-old woman as having clinical manifestations of a suprarenal tumor shown to be a pheochromocytoma. The tumor was removed successfully by Dr. Arthur Shipley. The patient made a full recovery, and her hypertension was relieved. Physiologic studies of the tumor tissue performed by Dr. W. H. Schultz revealed the characteristic smooth muscle reaction of epinephrine. In 1937, with Dr. Edmund Bradley, Dr. Pincoffs reported for the first time the association of arterial hypertension and embryonal adenomyosarcoma of the kidney (Wilm's tumor) in three small children.

In 1948, a small team of medical scientists, of which I was a member, went to Malaya to test a new and promising antibiotic known as Chloromycetin. Knowing of its great potential and specific use in typhus fever, I was able to inform Dr. Pincoffs of its equal probable efficacy in patients with Rocky Mountain spotted fever. A sufficient supply was provided in Baltimore for testing. Clinical evaluation in Maryland rapidly revealed the remarkable effect of Chloromycetin (chloramphenicol) in this serious and violent illness. This was the first specifically known cure for Rocky Mountain spotted fever. This work was published in 1948.

When it became clear that chloramphenicol might be an effective antimicrobial agent, it was necessary for me to gain Dr. Pincoffs approval to join the small team in Malaya and to ask the university to sponsor a $50,000 contract by the Department of Defense. This grant inaugurated the department's program in clinical and applied research. When he learned of the antibiotic's potential and of the contemplated study in Kuala Lumpur, Dr. Pincoffs remarked: "I wish I were a younger man."

Perhaps Dr. Pincoffs's most informative teaching sessions for students, house officers, and faculty were his discussions at clinical pathological conferences. Dr. Hugh Spencer, Chairman of Pathology, was delighted in presenting a challenge to Dr. Pincoffs. Always competitive, Dr. Pincoffs was equal to the challenge. Whether or not his conclusion was flawless, we observed firsthand how Pincoffs reasoned through difficult diagnostic problems. His final diagnosis usually was correct.

Professional Affiliations

As head of the Department of Medicine, Dr. Pincoffs faced many demands. His working hours, which extended seven days a week, were further occupied with a consulting practice and numerous community and national matters of great importance. He took an active part in the affairs of the Medical and Chirurgical Faculty of Maryland by serving as a member of its Council from 1935 to 1944, 1947 to 1949, and as its president in 1953.

Dr. Pincoffs played a major role in establishing a committee on medical care for the Maryland State Planning Commission. He chaired the first meeting, which was held on January 23, 1940. Under his direction, the committee on medical care developed Maryland's program for providing medical care to the indigent by establishing free clinics strategically located in Baltimore and throughout Maryland. This was a pioneer project of its kind in the United States. (One such clinic, the Baltimore Infirmary, was opened in 1923.) Maryland was among the first states to establish such programs for the needy. Dr. Pincoffs earned the tribute of "medical statesman" because of such public service.

Governor Herbert R. O'Connor appointed Dr. Pincoffs as a member of the State Board of Health in 1940. He served on that body continuously until 1959 and presided as its chairman. His experience gave him the insight to understand the needs of all Maryland citizens from the standpoint of prevention and treatment of illness. He had developed firsthand knowledge of available and needed resources to deal with these objectives.

Dr. Pincoffs contributions to his profession were not limited to Maryland nor to its School of Medicine and Hospital, which he served most of his active professional life. He was a respected member of the premiere medical societies in the field of internal medicine. The College of Physicians elevated Dr. Pincoffs to Mastership in 1947, a high accolade reserved for relatively few

of its members. He was elected president of the American Clinical and Climatological Association in 1949, and the American College of Physicians in 1951.

At a critical point following World War II, the Board of Reagents of the University of Maryland chose Dr. Pincoffs to formulate plans for the school's future and to assist in attracting key personnel to the Baltimore facility. Of particular significance was the recruitment of Jacob Finesinger MD as the first Director of the New Institute of Psychiatry. Contributions to our nation's health continued through his counseling as a senior consultant to the Armed Forces and the Public Health Service.

Editor

One of Dr. Pincoffs's major contributions was his editorship of the *Annuals of Internal Medicine* from 1933 to 1960. Whenever Dr. Pincoffs left the hospital, both hands were occupied, one with his medical bag, the other with a large dispatch case filled with manuscripts. He was assisted by able and humble Dr. Paul W. Clough, his associate editor, along with several assistant editors appointed by him. Under Dr. Pincoffs the *Annals* became one of the leading medical periodicals in the world, from an annual distribution of about 3,000 copies to a monthly circulation of about 24,000. Dr. Clough said of him,

> Dr. Pincoffs' work as editor of the *Annals* constituted one of his major contributions both to the College and to the profession generally. Selection of manuscripts always received his special attention. He desired first . . . some significant new contribution to a subject of inherent importance but he was especially critical as to the clarity with which the study had been planned, the apparent reliability of the experimental or clinical observations and their adequacy as proof of the conclusions reached. Dr. Pincoffs was a scholar well versed in the English language and adept at using it properly and effectively. Brevity, simplicity, clarity, precision in the use of words, coherence of thought, adherence to the customs and forms of good literary English characterized his writing, and he endeavored as far as possible to make the manuscripts which he edited conform to his high standards. He abhorred notoriously gross errors of spelling, grammar and syntax, but he tried to eliminate many other abuses of good English.

Character

Dr. Pincoffs commanded full respect: in any group, he was recognized as the tall, handsome, militarily erect man of stately bearing and gentlemanly manner. To those colleagues not close to him, he was regarded as reserved, often abrupt, and at times, aloof. Light talk did not interest him, and he was not a chummy type who mixed freely.

He had an ability to express himself precisely and with remarkable clarity. His extraordinary experience coupled with a precise memory allowed him to recount many interesting anecdotes. Intimate friends who might share a "spot of scotch" with Dr. Pincoffs recall his talent for vivid expression and his warm, friendly humor. With all his rich endowments, he infrequently used the personal pronoun and was unassuming.

When problems demanding careful reflection arose, as they frequently did, he approached them deliberately, meticulously, and calmly. He brought sound judgment to professional discussions since he invariably would reach the heart of a problem and carry it to its most logical conclusion. Once his mind was made up, he was solid as the Rock of Gilbraltar and it was rare, indeed, to shake him from his position. Those who failed to budge him from his point of view looked upon him in the image of Zeus; others simply regarded his integrity as "monumental."

He was impatient with minor problems, administrative routine, or inconsequential details, such as arranging attending or student schedules, preparing examinations, or correcting examination papers. Usually he inscribed examination questions for a whole class on the blackboard in Davidge Hall, composing as he proceeded.

Referring physicians anticipated delay in receiving a consultative medical report from Dr. Pincoffs but usually received an informative telephone call at 8 a.m. the day after the consultation. When I was emerging from medical adolescence to adulthood, Dr. Pincoffs graciously invited me to be his guest at the Medical Reunion dinner, an old Baltimore medical club. The predinner lubrication prompted me to relate the following anecdote to Drs. Pincoffs, Shipley, and Charles Austrian. Once I asked my father (a practitioner in Westminister) to name the best internist in Maryland. My father, who had referred many patients to internists and surgeons in Baltimore, responded "Pincoffs and Austrian." "Father, who is the better man?" I asked. My father reflected and said "Austrian." As a young Turk and neophyte under Dr. Pincoffs, I responded "Why do you say Dr. Austrian?" My father replied, "Because I get my reports quicker." Everyone had a good laugh.

During the days of much work and very few house officers, Dr. and Mrs. Pincoffs invited a few people to Markland, their home. After a hard day, the weary guests consumed several pre-dinner martinis on empty stomachs. Oysters on the half shell were a delightful change from the usual hospital fare. As Dr. Pincoffs was beginning to carve the ham, one of the young guests, whose complexion had changed, excused himself. Dr. Pincoffs, the gracious host, followed his guest and shortly returned. He resumed cutting the ham and remarked, "Just like a true Eastern shoreman, all of the martini and none of the oysters!"



Figure 6. Dr. Pincoffs at the tiller on Chesapeake Bay.



Figure 7. Lt. Col. Pincoffs MC at the beginning of World War II.

Dr. Pincoffs had a zest for outdoor life that provided him needed diversion and opportunity to associate with friends. He frequently went fishing with medical associates and loved to work outside. During summer vacations at Gibson Island, upper New York State, and Maine, Dr. Pincoffs took great pleasure in sailing, and in later years, painting landscapes.

Sailing was undoubtedly his greatest outdoor pleasure and his nautical friends dubbed him "master of the wheel." His serious interest in sailing began while he was a house officer at Bay View. He knew well the waters of the Chesapeake and enjoyed cruises in the company of his colleagues. Dr. Pincoffs was a fierce competitor and loved to cross the line in first place. According to his friends, once he had the tiller in his hands, no one else was likely to have a chance thereafter. Dr. "Pete" Toulson recounted an incident while sailing when Dr. Pincoffs had the tiller. While attempting a short cut at Kedges Strait, the boat went aground and could not be freed. Dr. Pincoffs, upset over the incident, was later seen below, reading a magazine upside down, a confirmation that his reactions to disappointment were sensitive and normal.

World War II

In Europe, thundering clouds of unrest had begun to form, culminating in the attack on Pearl Harbor and the U.S. entry into World War II. Prior to this, house officers, after finishing their training on Dr. Pincoffs's medical service, were sufficiently patriotically motivated to enter the military service. Dr. Pincoffs, a solider's solider, then 55 years old, was not about to miss the call. He sensed his country's need, and his patriotic fervor was undiminished. On the government's request, he vigorously organized a general hospital unit. In order to pass muster, he submitted to surgical correction of extensive varicose veins. The Hospital Medical Unit was split into two components; Dr. Pincoffs was Commanding Officer of the 42nd General Hospital, which landed in Australia in 1942. Later, he was detached from the hospital and made Chief of Preventive Medicine for the Southwest Pacific Theater under the Chief Surgeon and General Douglas MacArthur.

Prevention of illness among American forces in the disease-ridden tropical Southwest Pacific received Dr. Pincoffs's skill and attention. Once he broke away from his engrossing administrative work long enough to conduct a scientific field study that demonstrated conclusively that atabrine was a most effective antimalarial agent if taken daily. Characteristically, he was one of the test volunteers who was exposed to malarious mosquitoes. While at Milne Bay, Dr. Pincoffs was able to sail a Pearling Lugger from island to island for mail

and provisions.

When American forces re-entered the ravaged city of Manila in 1945, Dr. Pincoffs, acting under the authority of General MacArthur, organized and directed a health care program and in ten weeks established order from chaos. Malnourished lepers had freely walked the streets of Manila seeking help before the program's inception, but under an organized system the Manila Health Department hospitalized and treated malnourished and diseased citizens of the city. General health and preventive measures were developed. The harassed population gained confidence in its new medical administration. On one occasion, Col. Pincoffs walked quietly into Gen. MacArthur's headquarters and emerged with a faint smile on his face and the promise of trucks as well as medical and supportive supplies necessary to do the job. For his work in the Pacific, Dr. Pincoffs was awarded the Legion of Merit with Oak Leaf Cluster.

During those busy times in Manila, I once commented to Dr. Pincoffs that Huntington Williams would have to carefully protect his post as Commissioner of Health for Baltimore after the war. Dr. Pincoffs remarked "You never know when such experience will be of use."

Failing health and the troublesome effects of renal calculi hastened Dr. Pincoffs' return to the states. After the war, he returned to Baltimore and continued to wear his military uniform for a number of months. This added a little more authoritative presence to the charge given him by the Board of Regents of University of Maryland. As Assistant for Medical Affairs to President Harry C. (Curley) Byrd from 1949 to 1950, Dr. Pincoffs helped formulate plans for the school's future and assisted in attracting key personnel to the Baltimore faculty. William S. Stone's appointment as Dean of the School of Medicine was consummated during this period. During the war interim and for a while thereafter, Drs. T. Nelson Carey and Thomas Sprunt served as Acting Chairmen of the Department of Medicine.

Retirement

In 1954, Dr. Pincoffs retired as Chairman of the Department of Medicine. He then turned his interests to the social and medical problems in a changing environment and organized a new Department of Preventive Medicine and Rehabilitation that he headed until 1957, when he retired from teaching and became emeritus professor. Dr. Pincoffs continued his private consultative practice at the University of Maryland Hospital and accepted invitations for teaching throughout the east coast, where he was well known. One memorable trip took Dr. and Mrs. Pincoffs west to Washington state, which gave him a chance to relive some older experiences.



Figure 8. Col. Pincoffs (left) in New Guinea during World War II.

On the occasion of Dr. Pincoffs' retirement, the faculty of the University of Maryland School of Medicine, his friends, his former house officers, and patients honored him with a testimonial dinner. A portrait of him was unveiled, which now hangs at the entrance of Davidge Hall. A lectureship was established in his honor which brought distinguished educators to the Baltimore campus.

In 1956, Dr. and Mrs. Pincoffs acquired a summer home at Gibson Island, which enabled them to enjoy the company of their children and grandchildren and to be near the Bay should a brisk wind prevail.

On December 8, 1960, the long and distinguished career of Maurice Charles Pincoffs (then age 74) ended. He died at the University of Maryland Hospital after a brief illness. Services were held at the Cathedral Church of the Incarnation. Dr. Pincoffs was buried with military honors on a snowy day in the section of the

National Cemetary reserved for holders of the Distinguished Service Cross. Katherine R. Pincoffs, his loving and devoted wife, survived until 1981.

The medical profession will remember Maurice C. Pincoffs as one of Maryland's foremost medical teachers, clinicians, counselors, and medical administrators. His mind and his labors were shaped by and helped shape an era of almost ceaseless medical progress. Each of Baltimore's medical schools could boast of his life and accomplishments. The Johns Hopkins University took pride in him as a loyal alumnus. The University of Maryland School of Medicine acknowledged him as its most distinguished faculty member. Maryland could view with pride his long service and insight that brought to its citizens increased opportunities for help in alleviation of human illness. At his retirement dinner, it was aptly remarked: "Maurice Pincoffs is a true disciple of Aesculapius."

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Med-Chi Photo Contest Rules

Eligibility

All members of the Faculty and members of the Auxiliary to the Medical and Chirurgical Faculty may enter. Professional photographers may not enter. Members of the Photo Contest Committee and their families are not eligible.

Contest Rules

1. Photographs may be submitted in two categories—BLACK and WHITE or COLOR.
2. Limit: three entries per person.
3. Entries must have name, address, and telephone number attached to the BACK of each photograph.
4. PRINTS only, no smaller than 8 × 10 or larger than 11 × 14, will be accepted. If your favorite shot is a slide, you must have a print made to enter in the contest within these size ranges.
5. Entries may be mailed or brought to the Faculty Office, 1211 Cathedral Street, Baltimore, Maryland 21201 by the close of the business day on Thursday, April 16, 1987.
6. Entries MUST be matted or dry mounted. No framed photographs will be accepted.
7. Photographs entered in the contest will be on display at the Annual Meeting in April of 1987.
8. Winners will be announced at the Annual Meeting of the Medical and Chirurgical Faculty, April 29, thru May 1, 1987.
9. Photographs will NOT be mailed back. Photographs may be claimed at the exhibit area at the close of the Annual Meeting on Friday, May 7 or at the Faculty Building thereafter.
10. The Faculty does not guarantee against loss or damage of any kind to the photographs submitted to the contest.
11. Prizes will be awarded to the FIRST and SECOND place winners. Additional information about the prizes will be published in the JOURNAL.

Assessment of Dietary Status Using National Guidelines

ANN W. SORENSON PhD and GLADYS BLOCK PhD

Dietary status was determined for a group of persons systematically selected from the population in Washington County, Maryland. Nutrient values were compared to dietary recommendations for selected nutrients of public health interest and to estimated nutrient intakes of the U.S. population as measured by National Nutrition Surveys. Discrete dietary status information can aid community health professionals in developing counseling and management programs.

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In recent years there has been a growing interest by both professionals and the general public in finding ways to improve health by placing more emphasis on the prevention of disease. Nutritional factors appear to be related not only to a foundation of good health but also to a number of chronic conditions of major public health importance. Heart disease, hypertension, cancer, osteoporosis, cognitive function, and integrity of the immune system are just a few diet-related problems of current interest.[1-7]

The relationships between diet and chronic diseases are difficult to ascertain because of their multietiological nature. However, sufficient evidence is accumulating to draw some conclusions about dietary practices that are likely to improve nutritional status and general health.

The Department of Health and Human Services (DHHS) and the U.S. Department of Agriculture (USDA) have issued the second edition of the *Dietary Guidelines for Americans*,[8] for the purpose of improving the dietary status of the American public. These general nonqualitative recommendations identify nutrition parameters associated with diseases and syndromes that are the major causes of morbidity and mortality in the United States.

General guidelines for intakes of calories, fat, cholesterol, and sodium are addressed directly by the USDA/DHHS guide. These nutrients are of public concern because of their strong association with obesity, cardiovascular disease, hypertension, and possibly, some cancers.[4,9] In addition, saturated fat is regarded generally as a risk factor for cardiovascular disease, stroke, and hypertension, but there is mixed evidence suggesting polyunsaturated fat and cholesterol may be risk factors for cancer.[10,11]

Vitamins A and C have been identified as probable protective factors in the prevention or mitigation of several cancers, including lung, esophagus, and larynx.[12-14]

Calcium intake is of public health concern because of the relationship to osteoporosis and possibly blood pressure regulation.[5,15,16] Dietary iron is associated with iron deficiency anemia, although iron status is clearly dependent on a number of variables including intake and bioavailability of heme and non-heme dietary sources.[17-19]

Advice on alcohol consumption also is offered in the *Dietary Guidelines*. Though not considered a nutrient, alcohol can serve as a significant source of calories. In addition to the other potential hazards of alcohol abuse, large quantities of alcohol can cause renal losses of B complex vitamins as well as increased requirements for fats, fat-soluble vitamins, potassium, folic acid, calcium, iron, magnesium, and zinc.

The study reported here examined the dietary habits of a sample of adults in Washington County, Maryland. The results were compared with national estimates of dietary status as reported by the National Health and Nutrition Examination Surveys (NHANES II, 1976–1980)[20] and the USDA Nationwide Food Consumption Survey (NFCS, 1977–1978)[21] to see if dietary status data collected from a local population could help develop better focus for community campaigns aimed at helping consumers achieve the Dietary Goals for Healthy Americans. The data collected in this study were provided to the Washington County Department of Public Health for use in planning local nutrition programs targeted toward the specific needs of the community.

A summary of the dietary intakes and individual counseling material were returned to each person in the study, and personal intake data were released to private physicians at the request of study participants. These individual dietary evaluations in conjunction with other measures of nutritional status (for example, laboratory tests, anthropometric evaluations, clinical examinations, and health and social histories) can suggest guidelines for individual patient counseling and management.[22]

Methods

Participants in this study were selected from residents enrolled in a private census of Washington County, Maryland, conducted by the Epidemiology Training Center of the Johns Hopkins School of Hygiene and Public Health. A systematic sample was drawn from the persons listed in the 1975 census. The 50 persons selected for the study were between the ages

of 25 and 80 and living within the vicinity of Hagerstown, Maryland.

Four instruments (24-hour recall, weighed food diary, food frequency, and an adaption of a diet history) were used to obtain food intake information on the study participants. The design of this study (reported elsewhere)[23] was sufficiently detailed to describe the dietary patterns of individuals as well as to provide group data that reflected the eating practices of the defined population.

Estimates of intake for 18 nutrients (including those emphasized in the USDA/DHHS Dietary goals) and others of public health concern, energy, alcoholic beverages, and vitamin/mineral supplements were determined for the study participants.[8,12,13,24]

Nutrient estimates were computed using a computerized nutrient data bank developed from a number of documented sources, including revised USDA Handbooks 8 and 456 (tape data set 456-3, release 4, 1983, PB 83-180, 479),[25] data from the food industry, and published and unpublished data of food composition from government and private laboratories.[26] Dietary fiber was not included in the analysis because of inadequate food composition intake. In addition, recognized recommendations for fiber intake have not been established, and no fiber intake estimates were made for the National Nutrition surveys.

The estimated nutrient intakes for the study population were expressed as a percent of a recommended daily intake standard for age and sex shown in Table 1,[17] based on nationally recognized nutritional recommendations including the National Research Council's Food and Nutrition Board's Recommended Dietary Allowances (RDAs).[14] Using these standards allowed some semiquantitative comparisons of diet patterns of the study participants to the general U.S. population as measured by NHANES II (1976–1980)[20] and the NFCS (1977–1978).[21]

Though useful, these nutrient intake comparisons must be interpreted with some discretion because of differences in sampling and data collection techniques used among the national nutrition surveys and the study reported here.

Results

The estimated mean nutrient intake of the total study cohort was within recommended amounts for all nutrients except carbohydrate (especially complex forms) (82 percent std), calcium (82 percent), potassium (65 percent), and linoleic acid (51 percent) relative to the dietary standards used for analysis (see Table 1). However, protein, total fat, phosphorus, vitamin A, riboflavin, niacin, vitamin C, saturated fatty acid, and oleic acid were all consumed in mean amounts of greater than 120 percent of estimated need. A polyunsaturated fatty acid (PUFA) to saturated fat ratio (P/S ratio) for the diet of this population is approximately 0.36, less than half the recommended level of 0.8. Compared to the reference standards of 11 percent of total Kcal from protein, 30 percent from fat and the remaining 59

Table 1. Dietary Standards and Recommended Dietary Allowances (RDAS) used in Assessment of Dietary Adequacy[17,32,42]

Nutrient		Males		Females	
		<50 yrs	>50 yrs	<50 yrs	>50 yrs
Calories[a]	(Kcal)	2500	2000	1600	1400
Protein [a]	(g)	56	56	44	44
Total fat*	(g)	83[a]	66[a]	53[a]	47
Carbohydrate**	(g)	382	296	237	200
Calcium[a]	(mg)	800	800	800	800
Phosphorus[a]	(mg)	800	800	800	800
Iron[a]	(mg)	10	10	18	10
Sodium[a]	(mg)	2200	2200	2200	2200
Potassium[a]	(mg)	3750	3750	3750	3750
Vitamin A[a]	(iu)	5000	5000	4000	4000
Thiamin[a]	(mg)	1.4	1.2	1.0	1.0
Riboflavin[a]	(mg)	1.6	1.4	1.2	1.2
Niacin[a]	(mg)	18	16	13	13
Vitamin C[a]	(mg)	60	60	60	60
Saturated fat	(g)	28	22	18	16
Oleic acid	(g)	27	21	17	15
Linolic acid	(g)	28	22	18	16
Cholesterol	(mg)	350	350	350	350

[a] Based on NRC/FNB Recommended Dietary Allowances[14]
* 35 Percent of total calories
** 55 Percent of total calories

percent from carbohydrates, the diet of this population is high with respect to calories from protein (17 percent of total Kcal) and fat (36 percent of total Kcal) and low in calories from carbohydrates (47 percent total Kcal).

The group mean sodium intake was modestly higher than the estimated requirement (112 percent) but it should be noted that sodium values do not reflect sodium used in cooking, added at the table or from sodium salts found in nonfood sources. The 2200 mg sodium standard (17) corresponds to 3g of salt (Nacl) per 1000 Kcal. Caloric intake for the study group was equivalent to the estimated requirement. Men averaged 94 percent and women 104 percent of the programmed standards.

Although average caloric densities of the diets of men and women in the study were similar (0.76 and 0.73 Kcal/gram consumed respectively) men consume more food and consequently more of every nutrient examined except cholesterol. The data also show that men obtain their nutrients from different portion sizes of foods and/or different food sources of nutrients than do females, especially for calcium, sodium, and cholesterol.

Nutrient intake data were examined by age (less than 50 years and greater than 50 years of age) for men and women. Younger men had significantly higher isocaloric intakes for protein and phosphorus and a lower intake for linoleic acid. Young women consumed significantly more total fat, saturated fat, and polyunsaturated fat (linoleic acid) than did females over 50.

The effect of educational level on trends in nutrient intake was stronger in males than females. Males with college experience consumed more of 10 (or 50 percent) of the nutrients than did their counterparts with high school or less education. Only sodium and saturated fat was consumed by the lower educational group in amounts greater than those in college level. Intakes of oleic, linoleic fatty acid, and cholesterol were virtually identical in both groups. Intakes of women in the two educational categories were much more alike. Vitamin C was the only nutrient consumed in the greatest amounts by both the college level males and females compared to the high school or less educational groups. (Males: high school = 82.8 mg/day, college = 213.2 mg/day. Females: high school = 92.3 mg/day, college = 116.0 mg/day.)

Nine (18 percent) of the participants used vitamin or mineral supplements. All of the supplement users were older adults ranging in age from 47 to 81 years old. Fifty-five percent of the supplement users were women. The number and dosage of nutrients varied widely among the respondents.

Alcoholic beverage consumption was calculated from the food frequency instrument. Although self-reported use of alcohol must be viewed with caution, eighteen (35 percent) of those interviewed and 53 percent of women over 50 claimed total abstinence. Of those 28 persons who used alcohol on a regular basis, most consumed an average of three drinks per week.

The variance of nutrient intakes as reflected by standard deviations (SD) are similar to those found in the NHANES and USDA/NHCS.[20,21] The 1977–78 NHCS had standard deviations of 25 percent or more for most nutrients evaluated. The large standard deviations indicate that some individuals are consuming diets that are well below or above the recommended amounts even though the group mean intake for the nutrient is not significantly different from the standard.[23] In the study presented here, energy and protein showed the lowest variance (SD = 26 percent of mean), while vitamins A and C had the largest standard deviations at 52 percent and 47 percent of the means, respectively. Relatively few foods (mainly fruits and vegetables) provide most of the Vitamin A and Vitamin C in the usual diet accounting for intra- as well as inter-respondent variability for intake of these nutrients.

Discussion

Table 2 compares the consumption of selected dietary components of public health importance by the Washington County participants with those who participated in the NHANES II. The estimated nutrient intakes of the two groups are compared as ratios. Most of the ratios are within 10 percent of unity indicating similar nutrient consumption. Of note is that younger women in the study apparently consumed more vitamin A and older women consumed more iron, cholesterol, and less sodium than did their counterparts in the NHANES.

Sixteen percent of the total calories in NHANES II were contributed by protein, which is equivalent to the 17 percent of calories found in this study. These figures confirmed the impression that most Americans consume more than recommended amounts of protein. Men in this study consumed about the same amount of fat (37 percent vs. 38 percent) and less carbohydrate (46 percent vs. 51 percent) than the NHANES sample. Women in the study and in the NHANES II had similar intakes of these nutrients. These data indicated that persons in the U.S. (including those in this study) consumed more fat and protein and less carbohydrate than recommended.

The P/S ratio calculated from HANES II data was 0.36 and 0.39 for men and for women, respectively. These values are also very close to those estimated for men and women in Washington County. Like other Americans, the study population chose more food sources higher in saturated fat and consumed less than suggested sources of linoleic acid.

In this study calcium was a limiting nutrient for all females (75 percent of standard), but was close to the

RDA for men. By comparison, the HANES and NFCS showed women of all ages and older men had less than recommended intakes and only young men had mean calcium intake equivalent to the standard (RDA). The interaction of calcium, vitamin D, phosphorus, protein, and other nutrients is incompletely understood, making estimates of dietary requirements very difficult. However, because of these complexities and because the ability to increase absorption of calcium in the face of low calcium intakes decreases with age,[27,28] the Food and Nutrition Board elected to make a conservative adult recommendation of 800 mg of calcium per day and a recommended calcium to phosphorus ratio of 1:1.[17] Others urge adoption of a RDA of 1100 mg/day for all ages based on studies suggesting that bone reabsorption can be prevented or even reversed in many persons if they have a calcium intake of 800–1200 mg/day. In addition, high levels of protein promote urinary calcium excretion, which could compromise calcium status in persons with marginal intakes. The recommended amount of daily dietary phosphorus (800 mg) is exceeded by all ages of men and women in both HANES and this study.

The estimated mean dietary iron intake of Washington County residents exceeded that of HANES II respondents (see Table 2) as well as those in the NFCS; especially in the older age groups. Only younger women, whose RDA is 18 mg/day, did not meet their iron recommendation. Women who are in the child-bearing years have additional iron requirements that may not be met by usual dietary intakes that also do not exceed energy requirements.[25,29]

Dietary sodium has been strongly linked with hypertension especially in susceptible persons.[3,30,31] The HANES and Washington County males exceeded recommendations for sodium intake by 25 percent or more, while women maintained intakes close to the recommendation. If sodium from all sources were added, such as that used in cooking and at the table, the sodium intake of all groups would be higher than recommended. It is also of note that potassium, which has been negatively associated with hypertension, is consumed in amounts equivalent (a ratio of 1:1) to sodium (mg). A ratio of 0.6:1 has been recommended.[17,32] Other potential nutritional risks factors in hypertension are calcium, magnesium, polyunsaturated fat, dietary fiber,

Table 2. Comparison of Washington County Sample with NHANES II Results (Age Adjusted[a])

		Washington County Estimated Mean Intake				HANES II[21] Estimated Mean Intake				Intake Ratio**	
		Men[b]		Women[c]		HANES Men		HANES Women			
Nutrient	Age	Mean	%std	Mean	%std	Mean	%std	Mean	%std	Men	Women
Energy	<50	1,822	(0.73)	1,652	(1.03)	2,639	(1.05)	1,587	(0.99)	0.69	1.04
(Kcal)	>50	1,978	(0.99)	1,477	(1.05)	1,950	(0.97)	1,348	(0.96)	1.01	1.10
Fat (g)	<50	76.3	(0.92)	68.9	(1.32)	84.3	(1.01)	65.3	(1.23)	0.91	1.06
	>50	80.8	(1.19)	57.1	(1.22)	80.5	(1.20)	53.5	(1.14)	1.00	1.07
Calcium (mg)	<50	696	(0.87)	596	(0.75)	970	(1.21)	622	(0.78)	0.71	0.96
	>50	813	(1.01)	591	(0.74)	751	(0.94)	551	(0.69)	1.08	1.07
Iron (mg)	<50	14.5	(1.45)	11.1	(0.62)	16.8	(1.68)	10.7	(0.59)	0.86	1.13
	>50	15.5	(1.55)	12.6	(1.26)	14.4	(1.44)	10.5	(1.05)	1.08	1.20
Sodium (mg)	<50	3,059	(1.39)	2,455	(1.12)	3,693	(1.68)	2,336	(1.06)	0.83	1.06
	>50	2,747	(1.24)	2,149	(0.98)	2,971	(1.35)	2,987	(0.95)	0.99	0.72
Phosphorus	<50	1,304	(1.63)	1,049	(1.34)	1,592	(1.99)	995	(1.24)	0.82	1.05
(mg)	>50	1,313	(1.61)	991	(1.24)	1,327	(1.66)	894	(1.11)	0.98	1.10
Vitamin A	<50	10,446	(2.09)	5,221	(1.55)	5,813	(1.16)	4,663	(1.66)	1.80	1.33
(i.u.)	>50	6,977	(1.40)	5,902	(1.48)	6,219	(1.24)	5,494	(1.37)	1.12	1.07
Vitamin C	<50	98	(1.63)	98	(1.63)	108	(1.80)	91	(1.52)	0.91	1.08
(mg)	>50	108	(1.80)	101	(1.68)	101	(1.68)	106	(1.77)	1.07	0.95
Cholesterol	<50	327	(0.93)	273	(0.78)	455	(1.30)	282	(0.81)	0.72	0.96
(mg)	>50	382	(1.09)	302	(0.86)	406	(1.16)	252	(0.72)	0.94	1.20
%KCAL	<50		38%		38%		29%		37%	1.31	1.02
from fat	>50		37%		35%		37%		35%	1.00	1.00
P/S*	All ages =		0.38%		0.41%		0.36%		0.39%		

[a] Ages: 25 to 74
[b] N = 16
[c] N = 34
* P/S = Polyunsaturated fatty acid/saturated fatty acid(g)
** Washington County Nutrient Mean/Hanes Nutrient Mean

and alcohol.[33] Improvements in the dietary management of hypertension will most likely be dependent on a better understanding of the metabolic interaction of these nutrients.[34]

The mean intakes of the NHANES II and Washington County study groups for vitamin C were very close (see Table 2), but substantially more vitamin A was consumed by the Washington County study population. Although the mean intake of both vitamins C and A were above the RDAs for all population groups, there is a wide variation in consumption indicated by the large standard deviations for these nutrients.

High dietary cholesterol relative to the standard was not a problem for the study population; and mean intakes were lower than the 350 mg/day level. Estimated mean intakes of thiamin, riboflavin, and niacin exceed the RDAs for Washington County's population, in agreement with the nutrient means reported in the NHANES and NFCS.[20,21]

Recommendations regarding alcohol use must be given with caution. There is evidence that modest amounts of alcohol (one to two drinks a day) act in a protective role against coronary heart disease.[35] However, in counseling persons on use of alcohol in the diet, one must weigh the apparent protective effect of ethanol on coronary heart disease against the numerous social and health problems attributable to alcohol abuse. The prevalence of the many alcohol-related diseases including liver and kidney disease, malabsorption syndromes, some cancers, anemias, cardiomyopathy, bone reabsorption, fetal alcohol syndrome, and central nervous system (CNS) neurologic disorders are of significant public concern.[36–38]

NHANES II data showed that the highest consumption is reported by males, who drink apparently three to four times as much alcohol as females. Males in this study reported drinking 2.8 times as many alcoholic beverages as women (men 4.96 drinks/week; women 1.96 drinks/week).

The NFCS data from a cross-section of one day intakes indicate that less than 25 percent of the men and approximately 13 percent of the women under age 50 and 5 to 10 percent of those older than 50 listed alcoholic beverages as part of their diets on a given day in 1977.[39] By comparison only 8 percent of the study respondents reported drinking an alcoholic beverage on the 24-hour recall administered during the study.[21] Respondents of both sexes who use alcohol reported weekly to monthly consumption patterns with few claiming daily consumption of alcoholic beverages.

Based on these data, the study population appears to consume less alcohol than the U.S. average. The large number of abstainers may reflect a "life-style" of some groups in western Maryland that does not promote alcoholic consumption.

Eighteen percent of the study participants reported regular use of vitamin and/or mineral supplements. This figure is lower than that reported by several national surveys. Willett *et al.*[40] found that 38 percent of a national cohort of nurses used dietary supplements, while McDonald[41] estimated approximately 40 percent of the general population had taken some kind of supplement at least once in the prior two weeks.

While national surveys provide data for general dietary advice and national health programs, information on local dietary habits can provide the bases for more effective community nutrition programs and educational campaigns. The study in western Maryland illustrates how the assessment of dietary habits of residents can be used to provide data for local public health policy. According to the study data, community nutrition programs can help promote the USDA/DHHS Dietary Goals by reinforcing national campaigns to reduce dietary fat, especially saturated fat, and to increase calcium and complex carbohydrate. Special nutrition education campaigns might well be directed toward younger women and less educated men. Data indicate that most persons do not require nutrient supplements, especially Vitamins A, C, and B complex. Individual dietary evaluations can help health professionals identify those who require special dietary counseling.

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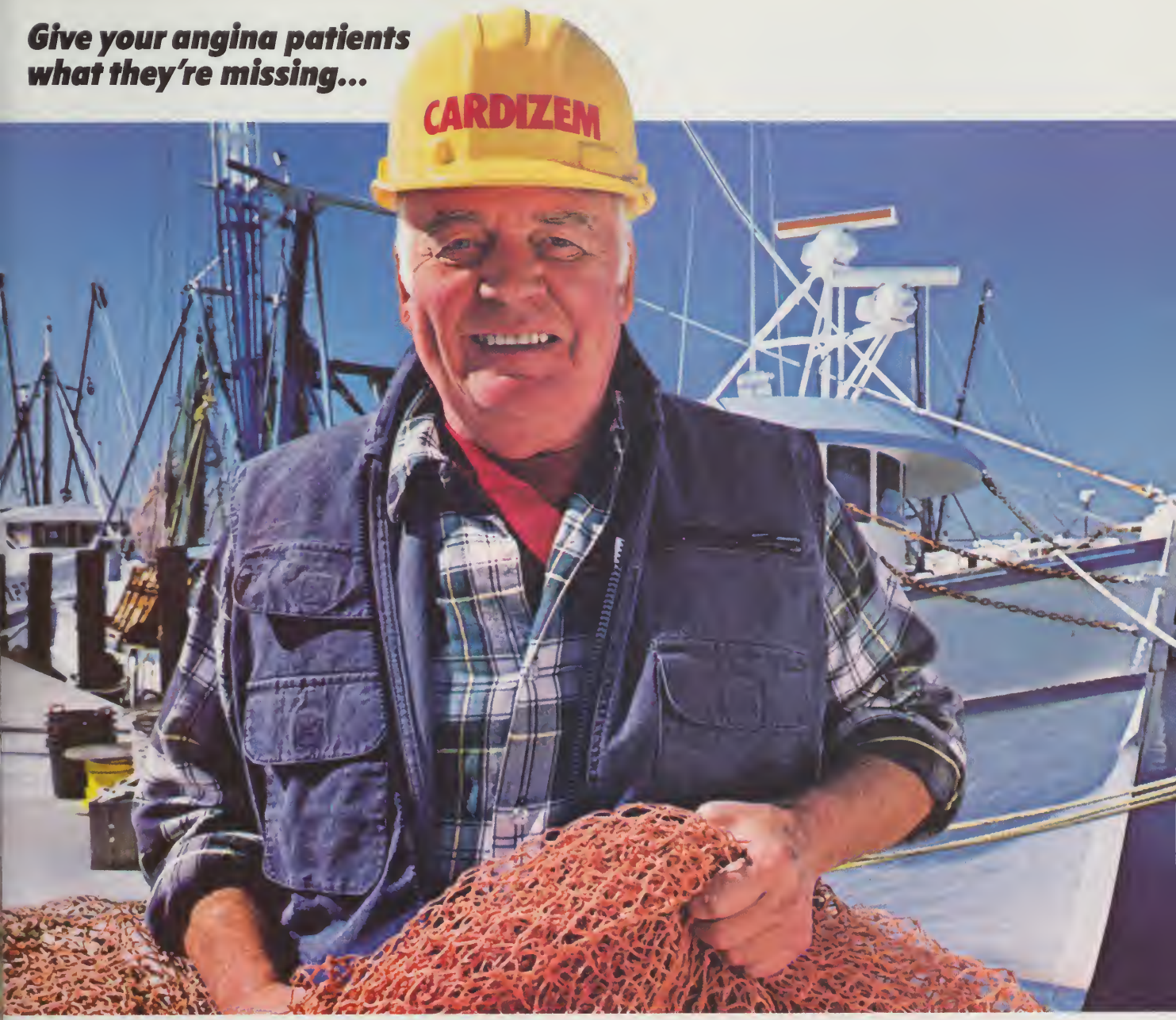
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Brief Summary
Professional Use Information

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CONTRAINDICATIONS
CARDIZEM is contraindicated in (1) patients with sick sinus syndrome except in the presence of a functioning ventricular pacemaker, (2) patients with second- or third-degree AV block except in the presence of a functioning ventricular pacemaker, and (3) patients with hypotension (less than 90 mm Hg systolic).

WARNINGS

1. ***Cardiac Conduction.*** *CARDIZEM prolongs AV node refractory periods without significantly prolonging sinus node recovery time, except in patients with sick sinus syndrome. This effect may rarely result in abnormally slow heart rates (particularly in patients with sick sinus syndrome) or second- or third-degree AV block (six of 1,243 patients for 0.48%). Concomitant use of diltiazem with beta-blockers or digitalis may result in additive effects on cardiac conduction. A patient with Prinzmetal's angina developed periods of asystole (2 to 5 seconds) after a single dose of 60 mg of diltiazem.*
2. ***Congestive Heart Failure.*** *Although diltiazem has a negative inotropic effect in isolated animal tissue preparations, hemodynamic studies in humans with normal ventricular function have not shown a reduction in cardiac index nor consistent negative effects on contractility (dp/dt).*
   Experience with the use of CARDIZEM alone or in combination with beta-blockers in patients with impaired ventricular function is very limited. Caution should be exercised when using the drug in such patients.
3. ***Hypotension.*** *Decreases in blood pressure associated with CARDIZEM therapy may occasionally result in symptomatic hypotension.*
4. ***Acute Hepatic Injury.*** *In rare instances, significant elevations in enzymes such as alkaline phosphatase, CPK, LDH, SGOT, SGPT, and other symptoms consistent with acute hepatic injury have been noted. These reactions have been reversible upon discontinuation of drug therapy. The relationship to CARDIZEM is uncertain in most cases, but probable in some. (See PRECAUTIONS.)*

PRECAUTIONS
General. *CARDIZEM (diltiazem hydrochloride) is extensively metabolized by the liver and excreted by the kidneys and in bile. As with any new drug given over prolonged periods, laboratory parameters should be monitored at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic function. In subacute and chronic dog and rat studies designed to produce toxicity, high doses of diltiazem were associated with hepatic damage. In special subacute hepatic studies, oral doses of 125 mg/kg and higher in rats were associated with histalagical changes in the liver which were reversible when the drug was discontinued. In dogs, doses of 20 mg/kg were also associated with hepatic changes; however, these changes were reversible with continued dosing.*

Drug Interaction. *Pharmacologic studies indicate that there may be additive effects in prolonging AV conduction when using beta-blockers or digitalis concomitantly with CARDIZEM. (See WARNINGS.)*

Controlled and uncontrolled domestic studies suggest that concomitant use of CARDIZEM and beta-blockers or digitalis is usually well tolerated. Available data are not sufficient, however, to predict the effects of concomitant treatment, particularly in patients with left ventricular dysfunction or cardiac conduction abnormalities. In healthy volunteers, diltiazem has been shown to increase serum digoxin levels up to 20%.

Carcinogenesis, Mutagenesis, Impairment of Fertility. *A 24-month study in rats and a 21-month study in mice showed no evidence of carcinogenicity. There was also no mutagenic response in in vitro bacterial tests. No intrinsic effect on fertility was observed in rats.*

Pregnancy. *Category C. Reproduction studies have been conducted in mice, rats, and rabbits. Administration of doses ranging from five to ten times greater (on a mg/kg basis) than the daily recommended therapeutic dose has resulted in embryo and fetal lethality. These doses, in some studies, have been reported to cause skeletal abnormalities. In the perinatal/postnatal studies, there was some reduction in early individual pup weights and survival rates. There was an increased incidence of stillbirths at doses of 20 times the human dose or greater.*

There are no well-controlled studies in pregnant women; therefore, use CARDIZEM in pregnant women only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. *Diltiazem is excreted in human milk. One report suggests that concentrations in breast milk may approximate serum levels. If use of CARDIZEM is deemed essential, an alternative method of infant feeding should be instituted.*

Pediatric Use. *Safety and effectiveness in children have not been established.*

ADVERSE REACTIONS
Serious adverse reactions have been rare in studies carried out to date, but it should be recognized that patients with impaired ventricular function and cardiac conduction abnormalities have usually been excluded.

In domestic placebo-controlled trials, the incidence of adverse reactions reported during CARDIZEM therapy was not greater than that reported during placebo therapy.

The following represent occurrences observed in clinical studies which can be at least reasonably associated with the pharmacology of calcium influx inhibition. In many cases, the relationship to CARDIZEM has not been established. The most common occurrences as well as their frequency of presentation are: edema (2.4%), headache (2.1%), nausea (1.9%), dizziness (1.5%), rash (1.3%), asthenia (1.2%). In addition, the following events were reported infrequently (less than 1%):

Cardiovascular:	*Angina, arrhythmia, AV block (first degree), AV block (second or third degree — see conduction warning), bradycardia, congestive heart failure, flushing, hypotension, palpitations, syncope.*
Nervous System:	*Amnesia, gait abnormality, hallucinations, insomnia, nervousness, paresthesia, personality change, somnolence, tinnitus, tremor.*
Gastrointestinal:	*Anorexia, constipation, diarrhea, dysgeusia, dyspepsia, mild elevations of alkaline phosphatase, SGOT, SGPT, and LDH (see hepatic warnings), vomiting, weight increase.*
Dermatologic:	*Petechiae, pruritus, photosensitivity, urticaria.*
Other:	*Amblyopia, dyspnea, epistaxis, eye irritation, hyperglycemia, nasal congestion, nocturia, osteoarticular pain, polyuria, sexual difficulties.*

The following postmarketing events have been reported infrequently in patients receiving CARDIZEM: alopecia, gingival hyperplasia, erythema multiforme, and leukopenia. However, a definitive cause and effect between these events and CARDIZEM therapy is yet to be established. *Issued 7/86*

See complete Professional Use Information before prescribing.

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ZOVIRAX®
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CAPSULES

Prevent genital herpes recurrences month after month with daily therapy.

(In controlled studies, recurrences were totally prevented for 4 to 6 months in up to 75% of patients.)

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ZOVIRAX®
(acyclovir)
CAPSULES

Help free your patients from recurrences.

Daily therapy

Coping with genital herpes is rarely easy. For some, the worst part is the pain and discomfort of frequent attacks—month after month, year after year. For others, the emotional burden presents a more difficult problem, leading to social isolation, anxiety, and diminished self-esteem.

Prevent or reduce recurrences

Although your patients have to live with herpes, they shouldn't have to suffer. Daily therapy with ZOVIRAX CAPSULES can help free them from the cycle of recurrent genital herpes. For many, one capsule three times a day can suppress recurrences completely while on therapy.

Generally well tolerated

Daily therapy with ZOVIRAX CAPSULES is generally well tolerated. The most frequent adverse reactions reported during clinical trials were headache, diarrhea, nausea/vomiting, vertigo, and arthralgia.

The physical and emotional difficulties posed by genital herpes are unique for each patient. The frequency and severity of recurrent episodes, as well as the emotional impact of the disease, should be considered when selecting daily therapy with ZOVIRAX CAPSULES.

Please see brief summary of prescribing information on next page.



Prevent recurrences month after month*

ZOVIRAX® (acyclovir) CAPSULES

Brief Summary

INDICATIONS AND USAGE: Zovirax Capsules are indicated for the treatment of initial episodes and the management of recurrent episodes of genital herpes in certain patients.

The severity of disease is variable depending upon the immune status of the patient, the frequency and duration of episodes, and the degree of cutaneous or systemic involvement. These factors should determine patient management, which may include symptomatic support and counseling only, or the institution of specific therapy. The physical, emotional and psychosocial difficulties posed by herpes infections as well as the degree of debilitation, particularly in immunocompromised patients, are unique for each patient, and the physician should determine therapeutic alternatives based on his or her understanding of the individual patient's needs. Thus Zovirax Capsules are not appropriate in treating all genital herpes infections. The following guidelines may be useful in weighing the benefit/risk considerations in specific disease categories:

First Episodes (primary and nonprimary infections — commonly known as initial genital herpes):

Double-blind, placebo-controlled studies have demonstrated that orally administered Zovirax significantly reduced the duration of acute infection (detection of virus in lesions by tissue culture) and lesion healing. The duration of pain and new lesion formation was decreased in some patient groups. The promptness of initiation of therapy and/or the patient's prior exposure to Herpes simplex virus may influence the degree of benefit from therapy. Patients with mild disease may derive less benefit than those with more severe episodes. In patients with extremely severe episodes, in which prostration, central nervous system involvement, urinary retention or inability to take oral medication require hospitalization and more aggressive management, therapy may be best initiated with intravenous Zovirax.

Recurrent Episodes:

Double-blind, placebo-controlled studies in patients with frequent recurrences (6 or more episodes per year) have shown that Zovirax Capsules given for 4 to 6 months prevented or reduced the frequency and/or severity of recurrences in greater than 95% of patients. Clinical recurrences were prevented in 40 to 75% of patients. Some patients experienced increased severity of the first episode following cessation of therapy; the severity of subsequent episodes and the effect on the natural history of the disease are still under study.

The safety and efficacy of orally administered acyclovir in the suppression of frequent episodes of genital herpes have been established only for up to 6 months. Chronic suppressive therapy is most appropriate when, in the judgement of the physician, the benefits of such a regimen outweigh known or potential adverse effects. In general, Zovirax Capsules should not be used for the suppression of recurrent disease in mildly affected patients. Unanswered questions concerning the human relevance of *in vitro* mutagenicity studies and reproductive toxicity studies in animals given very high doses of acyclovir for short periods (see Carcinogenesis, Mutagenesis, Impairment of Fertility) should be borne in mind when designing long-term management for individual patients. Discussion of these issues with patients will provide them the opportunity to weigh the potential for toxicity against the severity of their disease. Thus, this regimen should be considered only for appropriate patients and only for six months until the results of ongoing studies allow a more precise evaluation of the benefit/risk assessment of prolonged therapy.

Limited studies have shown that there are certain patients for whom intermittent short-term treatment of recurrent episodes is effective. This approach may be more appropriate than a suppressive regimen in patients with infrequent recurrences.

Immunocompromised patients with recurrent herpes infections can be treated with either intermittent or chronic suppressive therapy. Clinically significant resistance, although rare, is more likely to be seen with prolonged or repeated therapy in severely immunocompromised patients with active lesions.

CONTRAINDICATIONS: Zovirax Capsules are contraindicated for patients who develop hypersensitivity or intolerance to the components of the formulation.

WARNINGS: Zovirax Capsules are intended for oral ingestion only.

PRECAUTIONS: General: Zovirax has caused decreased spermatogenesis at high doses in some animals and mutagenesis in some acute studies at high concentrations of drug (see PRECAUTIONS — Carcinogenesis, Mutagenesis, Impairment of Fertility). The recommended dosage and length of treatment should not be exceeded (see DOSAGE AND ADMINISTRATION).

Exposure of Herpes simplex isolates to acyclovir *in vitro* can lead to the emergence of less sensitive viruses. The possibility of the appearance of less sensitive viruses in man must be borne in mind when treating patients. The relationship between the *in vitro* sensitivity of Herpes simplex virus to acyclovir and clinical response to therapy has yet to be established.

Because of the possibility that less sensitive virus may be selected in patients who are receiving acyclovir, all patients should be advised to take particular care to avoid potential transmission of virus if active lesions are present while they are on therapy. In severely immunocompromised patients, the physician should be aware that prolonged or repeated courses of acyclovir may result in selection of resistant viruses which may not fully respond to continued acyclovir therapy.

Drug Interactions: Co-administration of probenecid with intravenous acyclovir has been shown to increase the mean half-life and the area under the concentration-time curve. Urinary excretion and renal clearance were correspondingly reduced.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Acyclovir was tested in lifetime bioassays in rats and mice at single daily doses of 50, 150 and 450 mg/kg given by gavage. There was no statistically significant difference in the incidence of tumors between treated and control animals, nor did acyclovir shorten the latency of tumors. In 2 *in vitro* cell transformation assays, used to provide preliminary assessment of potential oncogenicity in advance of these more definitive life-time bioassays in rodents, conflicting results were obtained. Acyclovir was positive at the highest dose used in one system and the resulting morphologically transformed cells formed tumors when inoculated into immunosuppressed, syngeneic, weanling mice. Acyclovir was negative in another transformation system considered less sensitive.

In acute studies, there was an increase, not statistically significant, in the incidence of chromosomal damage at maximum tolerated parenteral doses of 100 mg/kg acyclovir in rats but not Chinese hamsters; higher doses of 500 and 1000 mg/kg were clastogenic in Chinese hamsters. In addition, no activity was found after 5 days dosing in a dominant lethal study in mice. In 6 of 11 microbial and mammalian cell assays, no evidence of mutagenicity was observed. At 3 loci in a Chinese hamster ovary cell line, the results were inconclusive. In 2 mammalian cell assays (human lymphocytes and L5178Y mouse lymphoma cells *in vitro*), positive responses for mutagenicity and chromosomal damage occurred, but only at concentrations at least 400 times the acyclovir plasma levels achieved in man.

Acyclovir has not been shown to impair fertility or reproduction in mice (450 mg/kg/day, p.o.) or in rats (25 mg/kg/day, s.c.). At 50 mg/kg/day s.c. in the rat, there was a statistically significant increase in post-implantation loss, but no concomitant decrease in litter size. In female rabbits treated subcutaneously with acyclovir subsequent to mating, there was a statistically significant decrease in implantation efficiency but no concomitant decrease in litter size at a dose of 50 mg/kg/day. No effect upon implantation efficiency was observed when the same dose was administered intravenously. In a rat peri- and postnatal study at 50 mg/kg/day s.c., there was a statistically significant decrease in the group mean numbers of corpora lutea, total implantation sites and live fetuses in the F_1 generation. Although not statistically significant, there was also a dose related decrease in group mean numbers of live fetuses and implantation sites at 12.5 mg/kg/day and 25 mg/kg/day, s.c. The intravenous administration of 100 mg/kg/day, a dose known to cause obstructive nephropathy in rabbits, caused a significant increase in fetal resorptions and a corresponding decrease in litter size. However, at a maximum tolerated intravenous dose of 50 mg/kg/day in rabbits, there were no drug-related reproductive effects.

Intraperitoneal doses of 320 or 80 mg/kg/day acyclovir given to rats for 1 and 6 months, respectively, caused testicular atrophy. Testicular atrophy was persistent through the 4-week postdose recovery phase after 320 mg/kg/day; some evidence of recovery of sperm production was evident 30 days postdose. Intravenous doses of 100 and 200 mg/kg/day acyclovir given to dogs for 31 days caused aspermatogenesis. Testicles were normal in dogs given 50 mg/kg/day, i.v. for one month.

Pregnancy: ***Teratogenic Effects:*** Pregnancy Category C. Acyclovir was not teratogenic in the mouse (450 mg/kg/day, p.o.), rat (50 mg/kg/day, s.c.) or rabbit (50 mg/kg/day, s.c. and i.v.). There are no adequate and well-controlled studies in pregnant women. Acyclovir should not be used during pregnancy unless the potential benefit justifies the potential risk to the fetus. Although acyclovir was not teratogenic in animal studies,. the drug's potential for causing chromosome breaks at high concentration should be taken into consideration in making this determination.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when Zovirax is administered to a nursing woman. In nursing mothers, consideration should be given to not using acyclovir treatment or discontinuing breastfeeding.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS — Short-Term Administration: The most frequent adverse reactions reported during clinical trials were nausea and/or vomiting in 8 of 298 patient treatments (2.7%) and headache in 2 of 298 (0.6%). Less frequent adverse reactions, each of which occurred in 1 of 298 patient treatments (0.3%), included diarrhea, dizziness, anorexia, fatigue, edema, skin rash, leg pain, inguinal adenopathy, medication taste and sore throat.

Long-Term Administration: The most frequent adverse reactions reported in studies of daily therapy for 3 to 6 months were headache in 33 of 251 patients (13.1%), diarrhea in 22 of 251 (8.8%), nausea and/or vomiting in 20 of 251 (8.0%), vertigo in 9 of 251 (3.6%), and arthralgia in 9 of 251 (3.6%). Less frequent adverse reactions, each of which occurred in less than 3% of the 251 patients (see number of patients in parentheses), included skin rash (7), insomnia (4), fatigue (7), fever (4), palpitations (1), sore throat (2), superficial thrombophlebitis (1), muscle cramps (2), pars planitis (1), menstrual abnormality (4), acne (3), lymphadenopathy (2), irritability (1), accelerated hair loss (1), and depression (1).

DOSAGE AND ADMINISTRATION: Treatment of initial genital herpes: One 200 mg capsule every 4 hours, while awake, for a total of 5 capsules daily for 10 days (total 50 capsules).

Chronic suppressive therapy for recurrent disease: One 200 mg capsule 3 times daily for up to 6 months. Some patients may require more drug, up to one 200 mg capsule 5 times daily for up to 6 months.

Intermittent Therapy: One 200 mg capsule every 4 hours, while awake, for a total of 5 capsules daily for 5 days (total 25 capsules). Therapy should be initiated at the earliest sign or symptom (prodrome) of recurrence.

Patients With Acute or Chronic Renal Impairment: One 200 mg capsule every 12 hours is recommended for patients with creatinine clearance ≤10 ml/min/1.73/m².

HOW SUPPLIED: Zovirax Capsules (blue, opaque) containing 200 mg acyclovir and printed with "Wellcome ZOVIRAX 200"- Bottles of 100 (NDC-0081-0991-55) and unit dose pack of 100 (NDC-0081-0991-56).

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*In controlled studies, recurrences were totally prevented for 4 to 6 months in up to 75% of patients.

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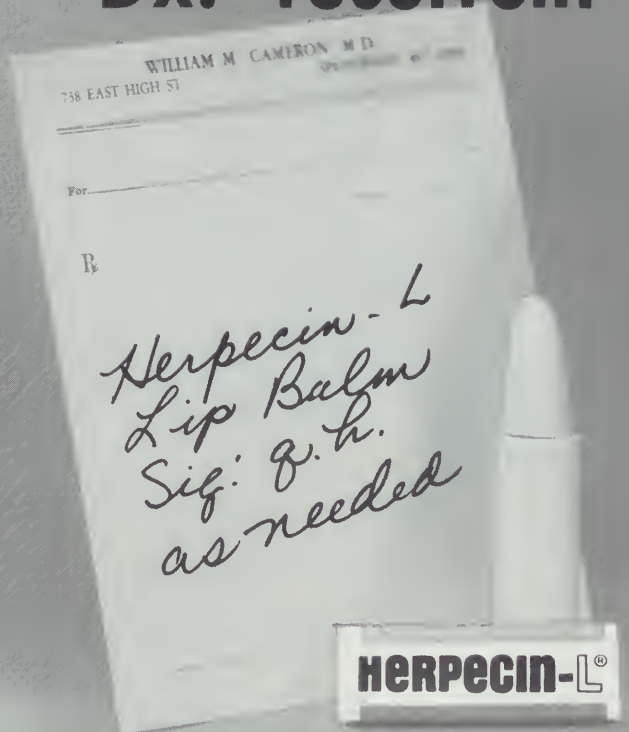
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Hepatitis B Surveillance in Korean Adoptees

W. ROBERT LANGE MD, SIDNEY D. KREIDER MD, and ELLEN WARNOCK-ECKHART MSW

In 1985 there were approximately 8,500 international adoptions in the U.S., a phenomenon that has doubled in the past five years. The majority of these children come from areas of the world where hepatitis B virus (HBV) is hyperendemic; over half are Korean immigrants. Adopted Korean children (N = 360) were screened for HBV markers, and 10 HBV carriers were identified (seroprevalence rate of 2.8 percent). We believe that providers responsible for the care of Korean adoptees should screen for the HBsAG carrier state, that HBV carrier children warrant periodic evaluation, and that susceptible household contacts of HBsAG-positive children should be protected with hepatitis B vaccine.

Drs. Lange and Kreider are at the Johns Hopkins Medical Institutions, Baltimore, and Warnock-Eckhart is with International Childrens Services, Associated Catholic Charities of Baltimore. **Reprints:** W. Robert Lange MD, P.O. Box 4718, Baltimore, MD 21211.

For a variety of reasons, the demand for children to be adopted in the U.S. exceeds the supply. Furthermore, the number of couples and individuals seeking to adopt children continues to increase. While the number of adoptions taking place each year in the U.S. is not known with certainty, it is estimated at 100,000 to 150,000. The number of international and foreign adoptions has nearly doubled from 4,864 in 1979 to 8,327 in 1984.[1] During a five-year interval (1978–1983), 25,935 foreign children were legally adopted by American citizens: 20,649 (80 percent) were placed through U.S. adoption agencies, and 5,286 (20 percent) were adopted abroad.[1] Asia has been the region of the world most represented. Korea accounts for the greatest number of children originating from abroad placed in U.S. homes: 53 percent of the total, a ranking that is 4.5 times greater than that of the South American country in the number two position, Colombia.

The U.S. Department of State in collaboration with the Public Health Service evaluates applicants for U.S. visas. From a medical perspective, attention is directed toward a variety of mental conditions as well as various so-called "dangerous contagious diseases," namely chancroid, gonorrhea, granuloma inguinale, leprosy, lymphogranuloma venereum, syphilis, and tuberculosis. Infection with Human Immunodeficiency Virus (HIV) (formerly referred to as HTLV-III/LAV, the etiologic agent for Acquired Immunodeficiency Syndrome) soon will be added to this list. Despite the foregoing, many conditions of clinical importance such as hepatitis B are not addressed during immigration. We describe part of an ongoing infectious disease surveillance project, discuss the prevalence of hepatitis B infection in a group of Korean adoptees, and outline a clinical strategy for evaluating the following HBsAg carrier children.

Methods

All adoptive Korean children placed by Associated Catholic Charities of Baltimore* undergo a comprehensive medical evaluation following placement in their American household. Through June 1986 the number of such adoptions totaled 360. All assessments are performed by the child's private physician in collaboration with the adoption agency and its consultant staff. This article describes screening that has been performed for HBV markers, namely, a current assessment for the presence of hepatitis B surface antigen (HBsAg). In addition, all children placed from January through June of 1986 (N = 87) were further screened for antibodies to the hepatitis B surface antigen (anti-HBs), antibodies to the hepatitis B core antigen (anti-HBc), and antibodies to the hepatitis A virus (anti-HAV). No measurements for the hepatitis B *e* antigen (HBeAg) were performed. Serologic studies for hepatitis A and hepatitis B markers were conducted using standard RIA test kits.

Results

The age range of the children at the time of adoption and evaluation ranged between 2.5 months and 12 years. The adoptees were 60 percent female, 40 percent male; 90 percent were from foster homes, 10 percent from orphanages. The latter group tended to reflect older children.

Ten children were identified as being HBsAg-positive (six male, four female) for an overall seroprevalence rate of 2.8 percent. The mean age of those testing positive was just under five months, and this was not significantly different from those testing negative.

During the first six months of 1986 when more extensive hepatitis screening was being conducted, five of 87 children (6 percent) were found to have HBV markers. Two HBsAg carriers (one male, one female) were identified (prevalence 2.3 percent), as were three adoptees (one male, two female) positive for anti-HBs and anti-HBc but antigen negative. The mean age was five months. During this period, one female infant developed acute hepatitis after arriving in the U.S. and was

* Responsibilities encompass four states: Maryland, West Virginia, Florida, and Louisiana.

diagnosed as having Non-A/Non-B hepatitis based on clinical course and negative serologies. Finally, one three year-old girl was found to be positive for anti-HAV.

Discussion

The finding that more female than male orphans are adopted reflects two patterns. There is a tendency for more females to be offered for adoption in Korea. Unmarried parent couples generally will relinquish a child regardless of sex, but impoverished or economically borderline married couples often are more inclined to retain a male child and offer a female for adoption. The surprising finding is that American couples prefer a girl when adopting a foreign-born child in a 65:35 ratio. Reasons vary but generally reflect the attitude that foreign-born females are easier to parent with less risks and difficulties, both medically and behaviorally.

The most serious health threat to the Korean adoptee seems to be related to HBV infection, despite the finding that the carrier rate among children in this study appears to be lower than might be anticipated from previous prevalence surveys. Hepatitis B, the chronic carrier state, and the resultant chronic liver disease are common and serious clinical concerns in Korea.[2-8] Even though the prevalence of the carrier state in Korea has not been delineated, many authorities have estimated it to be approximately 10 percent in the general population. One study of 140 adopted Korean children in California demonstrated an HBsAg carrier rate of 4.3 percent,[9] and another investigation of young Korean adults identified a rate of 6 percent in men and 4 percent in women.[10] Asian-American women of Korean ancestry living in California and New York had a carrier rate of 5.5 percent in one recent report,[11] and another survey of a college-age population revealed a rate of 12.5 percent among Korean students studying in Japan.[12] The CDC suggests that immigrants and refugees from areas of high HBV endemicity may have a carrier rate as high as 13 percent.[13] A 1984 Washington State Department of Social and Health Services study among adoptive families found that 10 to 15 percent of children adopted from Korea were positive for the virus (Zelnick, C.J., personal communication).

The reasons for the lower numbers in this survey are not clear. There should not be any selection bias that would preclude adoption of carriers since screenings are not done in Korea. Regardless, the HBsAg frequency demonstrated in this group is still 10 to 20 times higher than that observed domestically, where the overall carrier rate is well under 0.5 percent in the general population.[13]

The majority of HBsAg carriers in this study were male (60 percent). This corroborates other observations that the carrier rate is higher in males, even after standardization for the higher attack rate in males.[14] The prevalence rate through 1985, 8/287 of 28 per 1000 is not significantly different from that observed since that time, 2/87 or 23 per 1000 ($x^2 = 0.1$, $p \sim 0.70$), suggesting that the condition is not occurring or being reported with increased frequency.

Given the high HBsAg positivity rate and its implications regarding HBV transmission, it is prudent to screen children adopted from regions of high HBV endemicity. There is a known risk for the household transmission of HBV, and the Advisory Committee on Immunization Practices has recommended that susceptible household contacts of chronic HBsAg carriers be protected with hepatitis B vaccine.[13] The risk for horizontal transmission to household members after the adoption of a carrier child has been described,[15-17] and it appears that sibling contacts of a carrier child have a particularly enhanced risk.[18-23] Therefore all susceptible household contacts of children known to be chronically HBsAg-positive should be offered immunization.

Identification of chronic HBsAg carrier state in an adopted child is both confusing and anxiety provoking to the family. Guidance from the family physician is important, and the approach to the affected family must be tailored to their educational background and the intellectual and emotional makeup of the people involved. Counseling must include accurate and current medical information, and areas of controversy and ignorance should be presented truthfully and in a reassuring manner. To facilitate adjustment and acceptance of the child, notification outside the household should be kept to a minimum. Health department officials need to be advised and can be counted on to respond confidentially. The family dentist should be made aware of the carrier state before treatment is rendered. The question of notifying school authorities should be addressed individually, but as a general rule to facilitate social adaptation, only those with a crucial or legal need to know should be advised; and in the absence of evidence of disease transmission or if the child is HBeAg negative, it is probably ethical not to inform friends, teachers, babysitters, or day care centers during these early years. The maturing carrier, in addition to being advised that he or she should not donate blood, may wish to advise close contacts that risk of infection exists, particularly if the carrier is HBeAg positive and/or there is evidence of transmission of HBV from the carrier to other contacts.

The carrier child will require regular medical follow-up. Even though the prognosis is generally good, they are at increased risk of developing a variety of immune-complex disorders and hepatic complications.[24] The latter include delta hepatitis,[25] chronic active hepatitis,

cirrhosis, and primary hepatocellular carcinoma (PHC). It has been estimated that approximately 25 percent of chronic HBsAg carriers will develop some chronic liver-related sequelae later in life.[26]

A child whose initial HBsAg screening is found to be positive should be rescreened in six months to confirm the chronic-carrier state. Once documented, susceptible household contacts can be immunized, and baseline liver function tests should be obtained. These should include ALT, AST, total bilirubin, HBeAg, and a baseline alpha-feto protein (AFP). AFP is a marker for PHC and may be elevated in the serum for up to two years before the clinical presentation of the malignancy.[27] Even though the role of assaying for AFP in the secondary prevention of PHC is not defined, it appears to have a place,[28] and is recommended in both the baseline assessment and periodic evaluation of adoptees.

The Figure suggests a scheme for the management of the HBV carrier. The frequency of follow-up depends on the status of the child, but initially should be done on an annual basis, more often if liver function is impaired. Liver biopsy should be reserved for deteriorating hepatic function, and aggressive intervention, including angiography, is indicated in the face of a positive AFP assay.

It is important to keep the problem of hepatitis B in perspective. Although in the Orient it is an extremely common illness, domestically it will be only an incidental aspect in the overall management of the international adoptee. During the children's first year in the U.S., reported infectious diseases do not appear to be appreciably different from what is observed in native-born children of comparable age, and generally consist of otitis media, respiratory ailments, and viral exanthems. This is similar to what has been reported in other refugee children relocating to the United States.[29]

In conclusion, it is recommended that physicians and other health care providers responsible for the primary care of children born overseas be cognizant of the threat posed by hepatitis B and the steps necessary to assure appropriate surveillance and treatment as well as to minimize continued transmission.

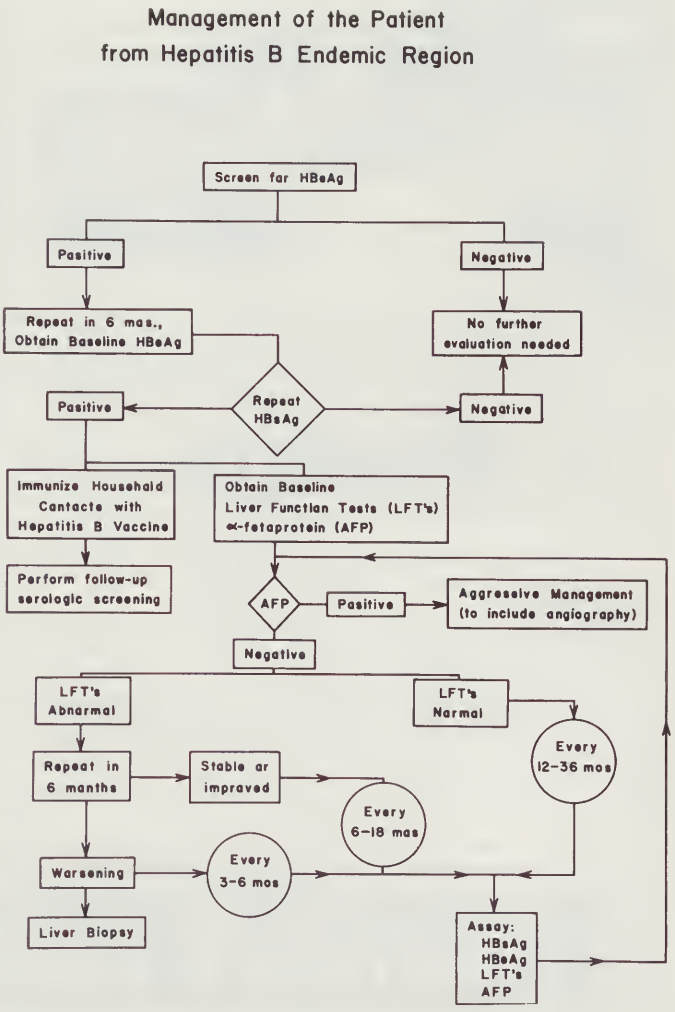


Figure. The hepatitis B carrier state requires continuing medical evaluation on the part of the health care provider. The frequency of the assessments and their aggressiveness is dependent on the health status of the child.

Acknowledgment

The authors appreciate the interest and cooperation demonstrated by the medical community during the evaluation of this group of children. We also recognize the courage manifested by the adopting parents.

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Medical Miscellaney

Hospital Charges Up, Length of Stay Down

Hospital charges jumped 7.5 percent last year despite cost-containment efforts and a decline in the average stay from 6.6 days to 6.4 days, according to a private study released last December. The average patient's bill per stay increased from $3,571 in 1984 to $3,840 last year, according to the study by Equicor, a joint venture of the Hospital Corporation of America and the Equitable Group and Health Insurance Company.

"Greater movement of patients to outpatient treatment facilities, the growing use of home care, new medical technologies and procedures, and increasing hospital efficiency have contributed to the overall decline in the length of hospital stays," said Joseph C. Hutts, chief operating officer of Equicor.

The study showed wide variations in hospital costs, from a 34 percent increase in Louisiana to a 26.8 percent decline in South Dakota. Hospital charges increased in 40 states but declined in 10 states and the District of Columbia, according to the study.

There was no overall correlation between changes in costs and length of stay. Shorter patient stays result from changes in reimbursement under Medicare that began in 1983. Under the prospective payment system being phased in by Medicare, hospitals are paid according to a schedule of fees to treat specific illnesses regardless of the length of stay. The program is designed to encourage hospitals to reduce costs by eliminating unnecessary medical services and discharging patients sooner.

The hospital population today does not include many patients who were formerly treated in the hospital but now get outpatient care. The average stay is more expensive because the care is more intensive.

The study surveyed 2,362 general hospitals in 1,989 cities. More than half the patients in the hospitals stayed less than 30 days. Federal hospitals were not included in the survey, and hospitals were asked to exclude figures for geriatric, orthopedic, maternity, and psychiatric care.

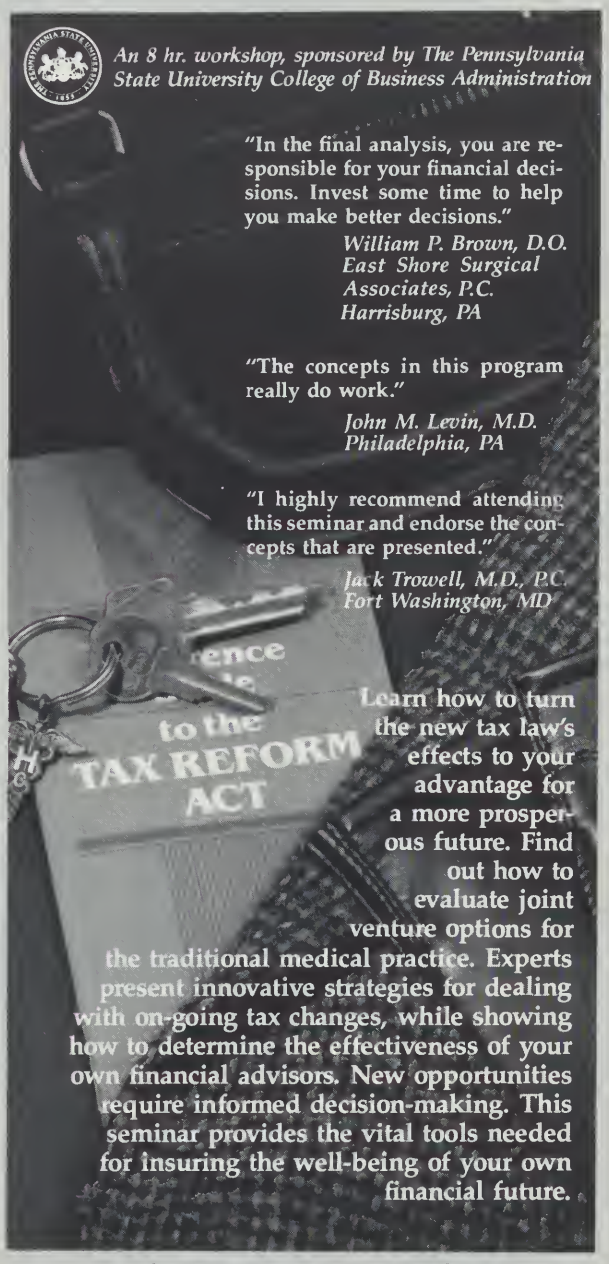
The average charge per stay was calculated by multiplying all charges, including room, board, medication, and laboratory fees, by the average length of stays. The costs of private attending physicians was not included in the calculation.

Average Hospital Charges and Stays

State	Stay	Daily Cost	Total Cost
Maryland	6.8	$470	$3,196
Delaware	6.6	552	3,643
Dist. Col.	8.5	777	6,605
Pennsylvania	6.7	655	4,389
Virginia	6.4	497	3,181
West Virginia	5.9	529	3,121

SOURCE: Equicor Study (Hospital Corporation of America & Equitable Group and Health Insurance Co.) reported by Associated Press 12-2-86.

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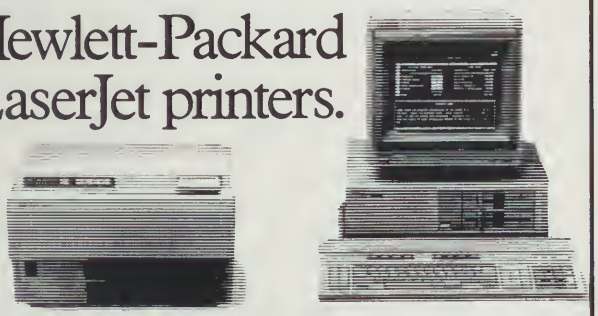
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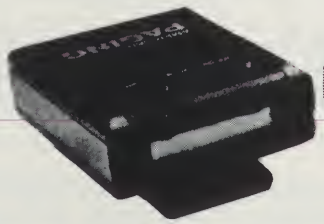
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All courses at the Turner Auditorium Building unless otherwise indicated. Sponsored Continued Education Activities for 1986–87. Info: Office of Continuing Education, 720 Rutland Ave., Turner Auditorium, Baltimore, MD 21205 (301-955-5880).

Mar 9–11 Spectrum of Developmental Disabilities IX: Minus 0–30 Months: Clinical and Research Issues. Fee: $300; 20 AMA Cat I credits; 20 Cat A credits for psychologists; 2.0 CEU. Info: C. Kearney, 301-955-3168.

Mar 12–13 Positron Emission Tomography and the Chemistry of Mental Illness. Fee: $275, residents and fellows $175; 15 AMA Cat I credits. Info: P. Macedonia, 301-955-6085 or J. Buchanan, 301-955-8582.

Mar 21–22 Hemodynamic Monitoring/Patient Care and Pulmonary Artery Catheterization. Fee: $360; 14 AMA Cat I credits. Info: J. Ryan, 301-955-6046.

Mar 23–24 Non-Occupational Exposure to Asbestos in Schools and Other Buildings: Risk Assessment and Management. Fee: $350, Johns Hopkins Health Associates $275; 12.5 AMA Cat I credits, 1.25 CEU, 2 ABIH. Info: J. Corn, 301-955-2609.

Mar 30–Apr 1 Tutorials in Laser Angioplasty and Interventional Radiology. Fee: $400 physicians, $200 residents, nurses, technicians; 25 AMA Cat I credits, 24 ECE credits by ASRT. Info: C. Kearney, 301-955-3168.

Apr 6–11 Pediatric Trends 1987. Fee: $500, residents and fellows, $350; 45 AMA Cat I and 45 PREP American Academy of Pediatrics credits. Info: C. Sentman, 301-955-6085 or E.M. Sills MD, Park 207, Johns Hopkins Hospital, 600 N. Wolfe St., Baltimore, MD 21205.

Apr 11 Current Concepts in Thyroid Disease. Fee: $125; 8 AMA Cat I credits. Info: D. Heydinger, 301-955-6046.

May 22 Seventeenth Anniversary Meeting of the Retinal Vascular Center—Clinical Trials and the Practice of Ophthalmology. Fee: $190, residents and fellows $100. Info: D. Heydinger 301-955-6046.

Johns Hopkins Medical Grand Rounds: audiocassettes, slides, and booklet. 30 topics and 40 AMA Cat I credits/year. Contact 301-955-3988, Office of Continuing Education, 720 Rutland Ave., Baltimore, MD 21205.

Ophthalmic Electrophysiology Technician Training Course (ongoing 1-week course by appointment), The Wilmer Eye Institute, Baltimore. Info: C.M. Kearney.

The Department of Radiology and Radiological Science offers several courses in abdominal and obstetrical ultrasound: Courses scheduled 1/12/87–12/7/87. Info: J. Mosmiller 301-955-8450.

Basic Practicum May 11–15, Nov 16–20. Fee: $460; 40 AMA Cat I credits.

Advanced Obstetrics & Gynecology May 8–10. Fee: $325; 24 AMA Cat I credits.

Advanced Practicum in Ultrasound Dec 7–11. Fee: $460; 40 AMA Cat I credits.

Visiting Physicians is offered throughout the year, by appointment only. Fee: $460; 40 AMA Cat I credits.

Diagnostic Cytopathology for Pathologists, 1987 Postgraduate Institute: February to May 1987, subspecialty residency in Clinical Cytopathology, compressed into two courses, both of which must be taken:

Feb–Apr Home Study Course A—personal reading and microscopic study at own laboratory in preparation for Course B.

Apr 27–May 8 In-residence Course B—lecture series, laboratory study, and clinical experience at the Johns Hopkins Medical Institutions, Baltimore, MD, USA.

Designed solely for pathologists who are certified (or qualified for certification) by the American Board of Pathology or its international equivalent, this institute is an intensive refresher in all aspects of Clinical Cytopathology with time devoted to newer developments and techniques, special problems, and recent applications including *immunodiagnosis* and *needle* aspiration. Loan slide set with texts (Course A) will be sent each participant within the US and Canada for home study during Feb through Apr before Course B in Baltimore on April 27 to May 8. Participants outside the US and Canada must make arrangements to study Course A before Course B. *The entire course is given in English.*

Application and completed preregistration is advised ASAP: preregistration must be completed before **March 27, 1987**, unless by special arrangement. Info: John K. Frost MD, 604 Pathology Bldg, The Johns Hopkins Hospital, Baltimore, MD 21205, USA.

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University of Maryland School of Medicine

CME Courses: For each course additional information may be obtained by contacting Program of Continuing Education, University of Maryland School of Medicine, Room 300, MSTF, 10 South Pine St., Baltimore, MD 21201 (301-528-3956).

Mar 19–21 Third Annual University of Maryland Contact Lens Symposium, The Omni International Hotel, Baltimore. Fee: $160 before Mar 1; $175 thereafter; 12 AMA Cat I credits.

Mar 26–27 Third National Traumatic Brain Injury Symposium, sponsored by the Speech-Communication Disorders Program, MIEMSS, University of Maryland Medical System. Info: R. Schwartz, 301-528-6101.

Apr 3–4 Symposium on Urologic Cancer, Omni International Hotel, Baltimore. Fee and credit: TBA.

May 8–9 Current Practical Concepts in Endocrinology and Metabolism—1987, Omni International Hotel, Baltimore. Fee: TBA; 10.5 AMA Cat I credits.

Jun 4–6 Annual OB/GYN Symposium, Sheraton Fontainebleau Inn and Spa, Ocean City. Fee and credits TBA.

Jun 12 Topics in Ophthalmologic Surgery, Columbia Inn, Columbia. Fee and credits TBA.

Jun 21–26 13th Annual Family Medicine Review Course, Carousel Hotel, Ocean City. Fee: $375, credits TBA.

Jun 25–27 Dermatology Days, Carousel Hotel, Ocean City. Fee: $230 before Jun 3; $250 thereafter. Credits TBA.

Visiting Professor Programs—Directory of speakers and topics available for area hospitals and other health care organizations. An administrative fee is charged. Info: 301-528-3956.

Visiting Practitioner Preceptorships—Opportunity for physicians to participate in clinical situations in the University of Maryland Hospital. Requires approval from clinical department heads. Hour-for-hour AMA Cat I credits.

Sep thru Jun—Departmental Rounds and Conferences—Hands-on opportunity for practicing physicians, including lectures and discussions, produced by clinical departments. Brochure available. Hour-for-hour AMA Cat I credits.

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Miscellaneous Meetings

Feb 26 Artificial Ligaments, Grand Rounds. Shady Grove Adventist Hospital, 9901 Medical Center Dr., Rockville, MD 20850.

Feb 27–Mar 1 From Research to Relevance, Annual Meeting and CME, sponsored by VA Chapter, American Academy of Pediatrics and VA Pediatric Society, 15 AMA and 12 PREP credits. Info: VA Chapter, AAP, 1001 E. Main St., Ste 301, Richmond, VA 23219 (804-643-8130).

Mar 5 Office Gynecology for the Nongynecologist, Grand Rounds. Shady Grove Adventist Hospital, 9901 Medical Center Dr., Rockville, MD 20850.

Mar 12 Update on Colon Cancer, Grand Rounds. Shady Grove Adventist Hospital, 9901 Medical Center Dr., Rockville, MD 20850.

Mar 19 Pending Legislation Affecting Medical Practice, Grand Rounds. Shady Grove Adventist Hospital, 9901 Medical Center Dr., Rockville, MD 20850.

Mar 21 Legal Issues for the Private Practicing Psychiatrist, presented by the Maryland Psychiatric Society in conjunction with the Chesapeake Bay Chapter of the American Academy of Psychiatry and the Law. Sheraton Inner Harbor Hotel, Baltimore, 8:30 a.m. Fee: $90 psychiatrists and lawyers, $75 other mental health professionals, $35 residents and students; 5.5 CME credits. Info: C. Antlitz 301-625-0232 or I. Dittman 301-792-4022 ext. 365.

Mar 26 Hypertensive Emergencies, Grand Rounds. Shady Grove Adventist Hospital, 9901 Medical Center Dr., Rockville, MD 20850.

Mar 26 Review of the Genetic Influence on the Rheumatic Diseases, Maryland Society for the Rheumatic Diseases. Meeting at the Johns Hopkins Club. Info reservations: K. Krug, 301-366-0923.

Mar 28 MAFP Mini Conference—Cardiovascular Update for Family Physicians, Tidewater Inn East. Info: John B. Umhau, Jr., MD, 1204 Maryland Ave., Baltimore, MD 21201 (301-659-0640).

Apr 3–5 Ophthalmologic Plastic Surgery, Orbital Disease, and Neuro-ophthalmology, Medical College of Virginia CME Activity, Williamsburg Hospitality House. Fee $315. Info: K. Parrott, 804-786-0494.

Apr 6–8 Newborn Screening for Sickle Cell Disease and other Hemoglobinopathies, NIH Consensus Development Conference, Warren Grant Magnuson Clinical Center, Bethesda. Regis: N. Cowan, Prospect Assoc., 1801 Rockville Pike, Ste 500, Rockville, MD 20853 (301-486-6555).

Apr 9–12 Annual Meeting, The Virginia Society of Otolaryngology-HNS, Tides Inn, Irvington, VA. Info: D. Strawderman, 4205 Dover Rd., Richmond, VA 23221 (804-353-2721).

Apr 10–12 Fifth Annual MCV Symposium: New Trends in Anesthesia, Medical College of Virginia CME Activity. Williamsburg Hilton. Fee: $275. Info: K. Martin, 804-786-0494.

Apr 10–12 Twenty-second Annual Pediatric Springfest, Medical College of Virginia CME Activity, Williamsburg Hospitality House. Fee: $250. Info: K. Martin, 804-786-0494.

Apr 23–25 Twenty-third Annual Postgraduate Course in Radiology: The Chest, Medical College of Virginia CME Activity, Richmond Marriott. Fee: $325. Info: K. Parrott, 804-786-0494.

Apr 24–26 Ninth Annual Conference on Emergency Medicine for the Primary Care Physician, Medical College of Virginia CME Activity, Fort Magruder Inn and Conference Center. Fee: $295. Info: K. Martin, 804-786-0494.

Apr 24–26 Seventh Annual Clinical Concerns in Primary Care: Office Cardiology, Medical College of Virginia CME Activity, Williamsburg Hospitality House. Fee: $295. Info: K. Martin, 804-786-0494.

May 8–10 Sixth Annual MCV Cardiology Conference, Medical College of Virginia CME Activity, Williamsburg Hospitality House. Fee: $325. Info: K. Martin, 804-786-0494.

May 13–17 MAFP Annual Meeting and Scientific Sessions, Sheraton Fountainebleau Inn &

Spa, Ocean City. Up to 30.5 AMA Cat I credits and up to 30.5 AAFP prescribed credits. Info: R. Bonsack MD, 301-659-0640.

May 14–17 Annual Meeting, Virginia Society of Ophthalmology, Sheraton Tysons Corner. Info: D. Strawderman, 4205 Dover Rd., Richmond, VA 23221 (804-353-2721).

May 18–19 Fourteenth Annual Hans Berger Day and EEG Symposium, Medical College of Virginia CME Activity, Baruch Auditorium, Egyptian Bldg., Medical College of Virginia Campus, Richmond, VA. Fee: $250. Info: K. Martin, 804-786-8494.

May 21 Update of Epidemiological Studies in Autoimmune Diseases, Maryland Society for the Rheumatic Diseases. Meeting at the Johns Hopkins Club. Info and reservations: K. Krug, 301-366-0923.

May 23–25 Gynecologic Urology and Pelvic Surgery, Medical College of Virginia CME Activity, Williamsburg Hospitality House. Fee: $260. Info: K. Martin, 804-786-0494.

June 3–7 Eleventh Annual Postgraduate Course on Rehabilitation of the Brain-Injured Adult and Child, Medical College of Virginia CME Activity, Williamsburg Hilton. Fee: $285. Info: K. Martin, 804-786-0494.

Jun 15–17 Management of Clinically Localized Prostate Cancer, NIH Consensus Development Conference, Warren Grant Magnuson Clinical Center, Bethesda. Info: N. Cowan, Prospect Assoc., 1801 Rockville Pike, Ste 500, Rockville, MD 20852 (301-468-6555).

Jul 17–19 Practical Internal Medicine: Selected Topics for the Internist, Medical College of Virginia CME Activity, Cavalier Resort, Virginia Beach, VA. Fee: $295. Info: K. Martin, 804-786-0494.

Jul 31–Aug 2 Ninth Annual Pediatric Primary Care Conference: Pediatrics at the Beach, Medical College of Virginia CME Activity, Cavalier Resort, Virginia Beach, VA. Fee: $275. Info: K. Martin, 804-786-0494.



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BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR.)*

INDERAL® LA brand of propranolol hydrochloride **(Long Acting Capsules)**

DESCRIPTION. Inderal LA is formulated to provide a sustained release of propranolol hydrochloride. Inderal LA is available as 80 mg, 120 mg, and 160 mg capsules.

CLINICAL PHARMACOLOGY. INDERAL is a nonselective beta-adrenergic receptor blocking agent possessing no other autonomic nervous system activity. It specifically competes with beta-adrenergic receptor stimulating agents for available receptor sites. When access to beta-receptor sites is blocked by INDERAL, the chronotropic, inotropic, and vasodilator responses to beta-adrenergic stimulation are decreased proportionately.

INDERAL LA Capsules (80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with INDERAL LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of INDERAL tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially.

INDERAL LA should not be considered a simple mg for mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to INDERAL LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, INDERAL LA has been therapeutically equivalent to the same mg dose of conventional INDERAL as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure and rate pressure product. INDERAL LA can provide effective beta blockade for a 24-hour period.

The mechanism of the antihypertensive effect of INDERAL has not been established. Among the factors that may be involved in contributing to the antihypertensive action are (1) decreased cardiac output, (2) inhibition of renin release by the kidneys, and (3) diminution of tonic sympathetic nerve outflow from vasomotor centers in the brain. Although total peripheral resistance may increase initially, it readjusts to or below the pretreatment level with chronic use. Effects on plasma volume appear to be minor and somewhat variable. INDERAL has been shown to cause a small increase in serum potassium concentration when used in the treatment of hypertensive patients.

In angina pectoris, propranolol generally reduces the oxygen requirement of the heart at any given level of effort by blocking the catecholamine-induced increases in the heart rate, systolic blood pressure, and the velocity and extent of myocardial contraction. Propranolol may increase oxygen requirements by increasing left ventricular fiber length, end diastolic pressure and systolic ejection period. The net physiologic effect of beta-adrenergic blockade is usually advantageous and is manifested during exercise by delayed onset of pain and increased work capacity.

In dosages greater than required for beta blockade, INDERAL also exerts a quinidine-like or anesthetic-like membrane action which affects the cardiac action potential. The significance of the membrane action in the treatment of arrhythmias is uncertain.

The mechanism of the antimigraine effect of propranolol has not been established. Beta-adrenergic receptors have been demonstrated in the pial vessels of the brain.

Beta receptor blockade can be useful in conditions in which, because of pathologic or functional changes, sympathetic activity is detrimental to the patient. But there are also situations in which sympathetic stimulation is vital. For example, in patients with severely damaged hearts, adequate ventricular function is maintained by virtue of sympathetic drive which should be preserved. In the presence of AV block, greater than first degree, beta blockade may prevent the necessary facilitating effect of sympathetic activity on conduction. Beta blockade results in bronchial constriction by interfering with adrenergic bronchodilator activity which should be preserved in patients subject to bronchospasm.

Propranolol is not significantly dialyzable.

ONCE-DAILY

INDERAL® LA

(PROPRANOLOL HCl)

LONG ACTING CAPSULES



INDICATIONS AND USAGE. Hypertension: INDERAL LA is indicated in the management of hypertension; it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. INDERAL LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: INDERAL LA is indicated for the long-term management of patients with angina pectoris.

Migraine: INDERAL LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

CONTRAINDICATIONS. INDERAL is contraindicated in 1) cardiogenic shock; 2) sinus bradycardia and greater than first degree block; 3) bronchial asthma; 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.

WARNINGS. CARDIAC FAILURE: Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or INDERAL should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following abrupt discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (e.g., chronic bronchitis, emphysema) — PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY: The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, e.g., dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA: Beta-adrenergic blockade may prevent the appearance of certain premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia in labile insulin-dependent diabetes. In these patients, it may be more difficult to adjust the dosage of insulin.

THYROTOXICOSIS: Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol does not distort thyroid function tests.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case, this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS. *General:* Propranolol should be used with caution in patients with impaired hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta-adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be told that INDERAL may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

Clinical Laboratory Tests: Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS: Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if INDERAL is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

Pregnancy: Pregnancy Category C. INDERAL has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. INDERAL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. INDERAL is excreted in human milk. Caution should be exercised when INDERAL is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular: bradycardia, congestive heart failure; intensification of AV block, hypotension; paresthesia of hands; thrombocytopenic purpura, arterial insufficiency, usually of the Raynaud type.

Central Nervous System: lightheadedness, mental depression manifested by insomnia, lassitude, weakness, fatigue; reversible mental depression progressing to catatonia; visual disturbances; hallucinations; an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics.

Gastrointestinal: nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: bronchospasm.

Hematologic: agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-Immune: In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous: alopecia, LE-like reactions, psoriasiform rashes, dry eyes, male impotence, and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.

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REFERENCES:

1. INDERAL LA National Compliance Evaluation Program. Data on file, Ayerst Laboratories.
2. Ravid M, Lang R, Jutrin I: The relative antihypertensive potency of propranolol, oxprenolol, atenolol, and metoprolol given once daily. *Arch Intern Med* 1985; 145: 1321-1323.

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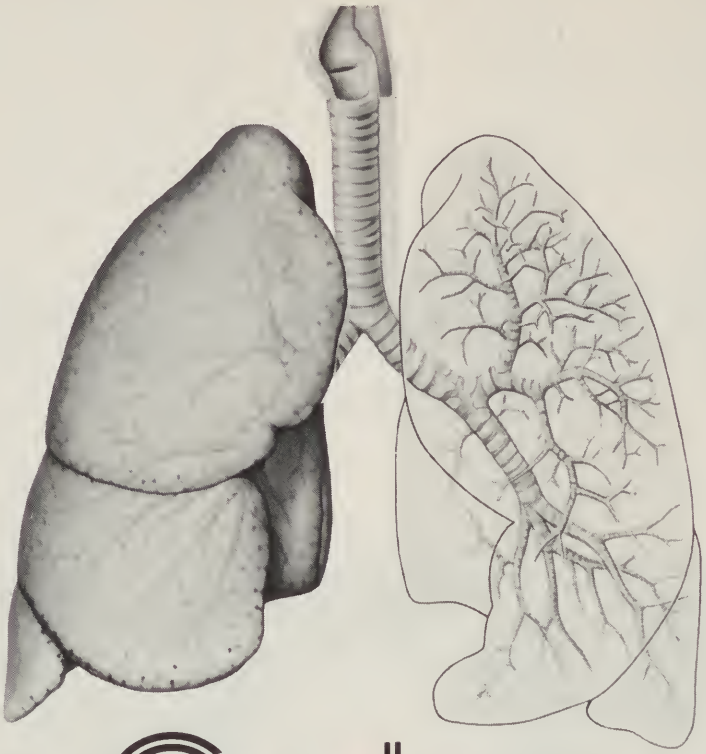
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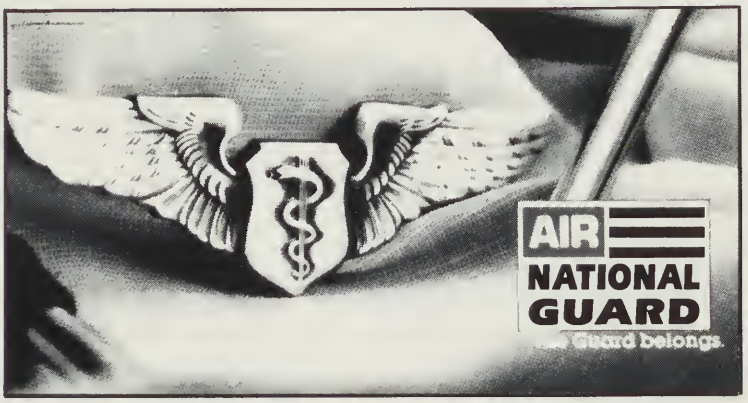
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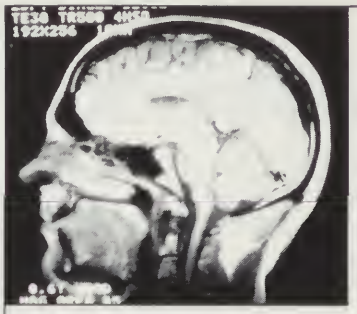
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Selected Medical Literature Searches

The following are among the computerized medical literature searches provided to Med-Chi members during November 1986.

		Number of Citations
1.	Causes of fetal growth retardation	33
2.	Complications of carpal tunnel syndrome surgery	27
3.	Fever of unknown origin in infants and children	20
4.	Gentamycin toxicity	18
5.	Gynecomastia and breast neoplasms	17
6.	Hospitals and disaster planning	19
7.	Liver cysts	33
8.	Osteochondritis of the knee	31
9.	Pathophysiology and treatment of disseminated intravascular coagulation	24
10.	Treatment of keloids	19

If you would like a copy of one of these searches or a search run on any biomedical topic, call or write the library

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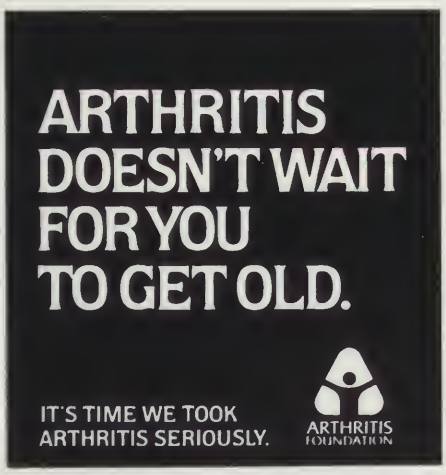
Book Review

Lives of Caroline County Maryland Physicians 1774–1984. Christian E. Jensen MD. Denton: Caroline County Medical Society, 1986. 227pp.

Dr. Jensen began his collected biography of Caroline County physicians in 1984 to commemorate the 350th anniversary of the founding of the state of Maryland. The volume contains an introduction; the collected biographies of Caroline County physicians arranged alphabetically and, in many instances, photographs; a brief description of Caroline County health officers; a short list of physicians recorded as having been registered in Caroline County but about whom no information was found; lists of references used; and finally, addenda and corrigenda to the volume.

Along with its earlier predecessors, *Quinan's Medical Annals of Baltimore* (Baltimore, 1884) and Cordell's *Medical Annals of Maryland, 1799–1899* (Baltimore, 1903), Dr. Jensen's collected biographies continues the sorely needed documentation of Maryland's rich medical heritage. Dr. Jensen's *Lives of Caroline County Maryland Physicians* will be a useful reference for generations to come.

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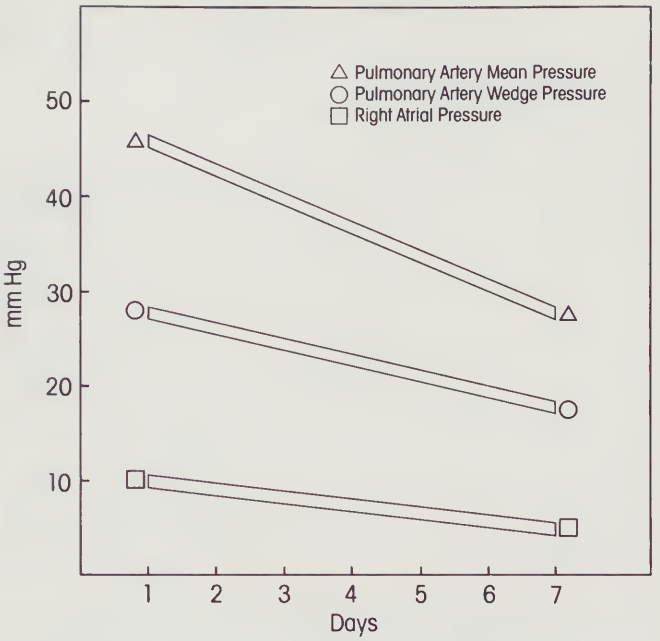
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Preventian af hypakalemia requires particular attentian in patients receiving digitalis and diuretics far cangestive heart failure, hepatic cirrhasis and ascites, states af aldasterane excess with narmal renal functian, patassium-lasing nephrapathy, certain diarrheal states, ar ather states where hypokolemia is thaught ta represent particular added risks ta the patients.
In patients with hepatic cirrhasis and ascites, sudden alterations af electralyte balance may precipitate hepatic encephalapathy and cama. Treatment in such patients is best initiated in the haspital with small dases and careful manitaring af the patient's clinical status and electralyte balance. Supplemental patassium and/ar spiranalactane may prevent hypakalemia and metabolic alkalasis in these patients.
In cats, dags and guinea pigs, Bumex has been shown ta praduce atataxicity. Since Bumex is about 40 to 60 times as patent as furasemide, it is anticipated that blaod levels necessary ta praduce atataxicity will rarely be achieved. The potential far atataxicity increases with intravenaus therapy, especially at high dases.
Patients allergic ta sulfanamides may shaw hypersensitivity ta Bumex.
PRECAUTIONS: Measure serum patassium periodically and add patassium supplements ar patassium-sparing diuretics, if necessary. Periadic determinatians af ather electralytes are advised in patients treated with high dases ar far pralanged periods, particularly in thase an law salt diets. Hyperuricemia may accur. Reversible elevatians af the BUN and creatinine may accur, especially with dehydratian and in patients with renal insufficiency. Bumex may increase urinary calcium excretian.
Passibility af effect an glucase metabalism exists. Periadic determinatians af blaad sugar shauld be dane, particularly in patients with diabetes ar suspected latent diabetes.
Patients should be abserved regularly far passible accurrence af blaad dyscrasias, liver damage ar idiasyncratic reactians.
Especially in presence af impaired renal functian, use af parenterally administered Bumex shauld be avaided in patients ta wham aminaglycaside antibiatics are alsa being given, except in life-threatening canditians.
Drugs with nephrataxic patential and bumetanide shauld nat be administered simultaneausly.
Since lithium reduces renal clearance and adds a high risk af lithium taxicity, it shauld nat be given with diuretics.
Prabenecid shauld nat be administered cancurrently with Bumex.
Cancurrent therapy with indamethacin nat recammended.
Bumex may patentiate the effects af antihypertensive drugs, necessitating reductian in dasage.
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Bumetanide may be excreted in breast milk.
Pediatric Use: Safety and effectiveness belaw age 18 nat established.
ADVERSE REACTIONS: Muscle cramps, dizziness, hypatensian, headache and nausea, and encephalapathy (in patients with preexisting liver disease).
Less frequent clinical adverse reactians are weakness, impaired hearing, rash, pruritus, hives, electracardiagram changes, abdaminal pain, arthritic pain, musculaskeletal pain and vamiting.
Other clinical adverse reactians are vertiga, chest pain, ear discamfart, fatigue, dehydratian, sweating, hyperventilatian, dry mauth, upset stamach, renal failure, asterixis, itching, nipple tenderness, diarrhea, premature ejaculatian and difficulty maintaining an erectian.
Labaratary abnarmalities reparted are hyperuricemia, azatemia, hyperglycemia, increased serum creatinine, hypochlaremia, hypakalemia, hypanatremia, and variatians in CO_2 cantent, bicarbanate, phaspharus and calcium. Althaugh manifestatians af the pharmacalagic actian af Bumex, these canditians may became mare pranaunced by intensive therapy.
Diuresis induced by Bumex may alsa rarely be accampanied by changes in LDH, tatal serum bilirubin, serum prateins, SGOT, SGPT, alkaline phasphatase, chalesteral, creatinine clearance, deviatians in hemaglabin, prathrombin time, hematacrit, platelet caunts and differential caunts. Increases in urinary glucase and urinary pratein have alsa been seen.
DOSAGE AND ADMINISTRATION:
Oral Administration: The usual tatal daily dasage is 0.5 ta 2.0 mg and in mast patients is given as a single dase.
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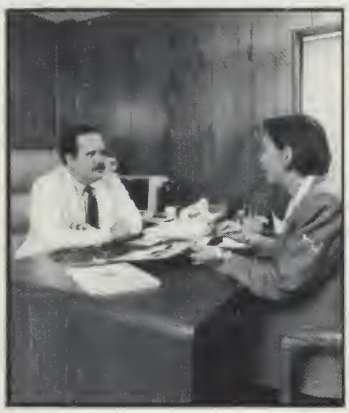
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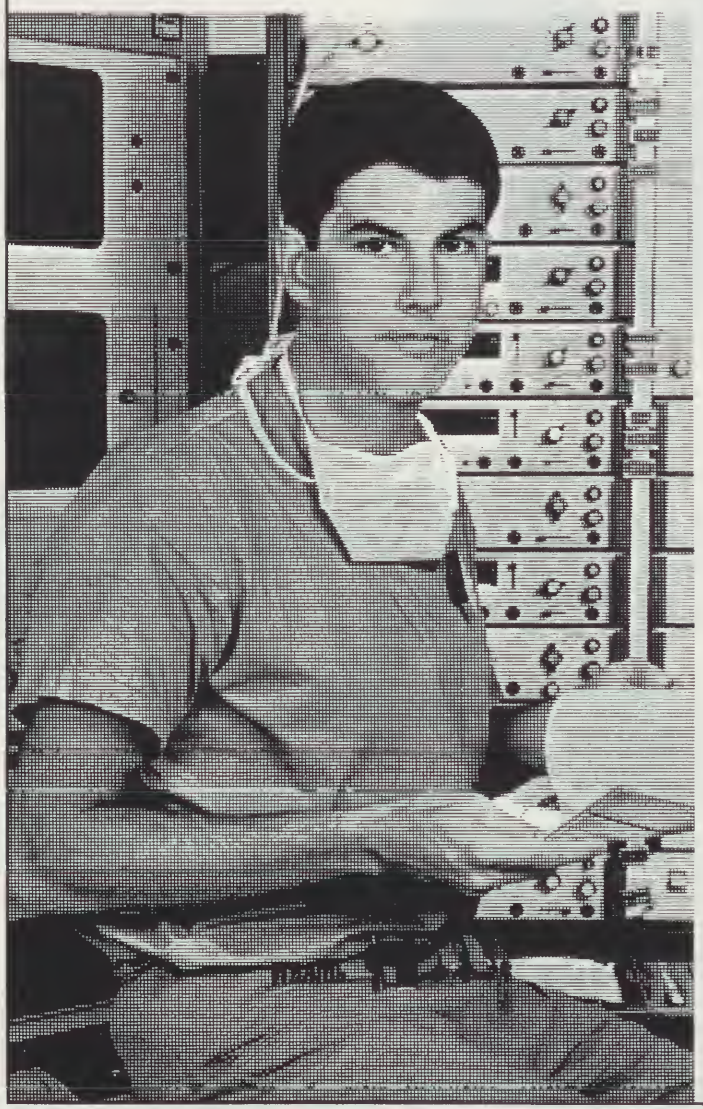
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Members in the News

Joseph S. Buffington MD has been elected chairman of obstetrics and gynecology at Montgomery General Hospital. A native of Atlanta, GA, Dr. Buffington received his medical degree from Duke University in North Carolina and served a residency in OB/GYN at the Duke University Medical Center. Prior to establishing a private practice in Montgomery County in 1981, Dr. Buffington served for seven years in the US Army, stationed at the Army Hospital in Nurnberg, West Germany, and also at the Walter Reed Army Medical Center.

• • •

Leeds E. Katzen MD was named chief of ophthalmology at Bon Secours Hospital. Dr. Katzen's special interest in his field includes phacoemulsification extracapsular cataract extraction, intraocular lens implantation, radial keratotomy, and the YAG laser. He holds academic appointments as clinical professor of ophthalmology at the University of Maryland School of Medicine; clinical assistant professor of ophthalmology at New York Medical College; and instructor of the phacoemulsification course at the Manhattan Eye and Ear Infirmary. He is the director of The Earnest A. Katzen Memorial Eye Research Institute and chief of ophthalmology at Mercy Hospital.

Dr. Katzen received his undergraduate and medical education at the University of Maryland, served his internship at Mercy Hospital, and completed a residency in ophthalmology at University Hospital.

• • •

Bernard S. Kleiman MD, an Otolaryngologist in private practice in Towson, has been elected President of the Baltimore County Medical Association. Dr. Kleiman is a graduate of the Johns Hopkins University and the University of Maryland Medical School. He is a member of the Medical Staff of St. Joseph Hospital and is a former President of the Medical Staff at St. Joseph Hospital. Other officers elected at the December meeting are as follows: President-elect, **A. Hamid Ghiladi** MD; Vice-President, **Benjamin V. Del Carmen** MD; Secretary, **Harold B. Bob** MD; and Treasurer, **Esther Edery** MD.

• • •

Henry P. Laughlin MD of Frederick recently was honored at the annual meeting of the American College of Psychoanalysts held in Washington. Dr. Laughlin is the founder of the college and served as its first president, 1969–72, and as its sixth president, 1976–77. He was elected honorary Life President in 1979. This year's meeting was dedicated to Dr. Laughlin, an unprecedented instance of national recognition for the college founder.

• • •

Norman Levin MD, has been appointed Acting Chief of the Department of Obstetrics and Gynecology at Maryland General Hospital. Dr. Levin received his medical degree from the University of Maryland Medical School and completed an internship and residency in OB/GYN at Lutheran Hospital in Baltimore. Certified by the American Board of Obstetrics and Gynecology in 1956 and recertified in 1980, Dr. Levin is Director of Medical Education in Obstetrics and Gynecology at Maryland General Hospital.

• • •

Charles F. Mess MD has been re-elected president of the medical staff of Montgomery General Hospital. He will serve a second one-year term of office. A graduate of Seton Hall University, in New Jersey, Dr. Mess received his medical degree from the New Jersey College of Medicine and Dentistry. He served an internship at the New Jersey City Medical Center before joining the US Navy Medical Corps for two years of service. Subsequently, Dr. Mess received a graduate degree from the Mayo Graduate School of Medicine. In 1971 he entered the private practice of medicine in the Washington metropolitan area and currently practices general orthopedics in the Rockville and Olney areas.

• • •

Michael E. Pelczar MD, senior attending pathologist and director of Microbiology and Immunology Laboratories at St. Agnes Hospital, assumed the position of president of the St. Agnes Hospital Medical Staff for 1987, after serving a one-year term as president-elect. Dr. Pelczar received his bachelor of science degree from the University of Maryland School of Medicine. After receiving his medical degree, he served an internship at St. Agnes. From 1966–68, he served a residency with the United States Public Health Service Hospital returning to St. Agnes to serve a pathology residency from 1968 to 1971.

• • •

Oscar M. Ramirez MD, a plastic surgeon in Baltimore, was invited by the American College of Surgeons to participate in their 72nd Annual Clinical Congress in New Orleans in October 1986. As a participant in the Plastic Surgery Interdisciplinary Panel Discussion, "Management of Difficult Perineal Wounds After Treatment of Inflammatory Bowel Disease," Dr. Ramirez addressed "Reconstructive Surgery for Coverage of Chronic Perineal Wounds with Muscle Flaps."

• • •

Edmund C. Tortolani MD has been appointed Acting Chief of Surgery of Maryland General Hospital. Dr. Tortolani received his Medical Degree from Yale University Medical School. He completed an internship at Yale New Haven Hospital in New Haven, CN, and a residency at Yale New Haven Hospital and the University of Maryland. He has been on the medical staff of Maryland General Hospital for 11 years and has a faculty teaching appointment at University of Maryland Hospital.

Michael C. Yen MD has been appointed Chief of Medicine at Maryland General Hospital. After completing his training in Internal Medicine and Fellowship in Cardiology at Maryland General Hospital, he went to Peter Bent Brigham Hospital, Harvard Medical School for Nephrology Fellowship. He returned to Baltimore in 1974 as Associate Head of the Division of Nephrology at Maryland General Hospital. He became Director of Medical Education in 1980 and Acting Chief of Medicine in 1983. Dr. Yen is Associate Professor of Medicine at the University of Maryland School of Medicine.

• • •

Kay S. Yingling MD, has been appointed medical director of Suburban Hospital's Mary Esther Center for Women. A board-certified radiologist, Dr. Yingling graduated from the University of Maryland. She received her medical degree from the George Washington University School of Medicine, and completed her internship and residency at the George Washington University Medical Center, where she served as chief resident of radiology. Dr. Yingling is a member of the medical staffs of Suburban Hospital and the Washington Hospital Center.

• • •

Jose M. Yosuico MD was installed as President of the Baltimore City Medical Society at its annual meeting. Dr. Yosuico received his MD degree from the University of Phillipines in 1953. He served as a intern at South Baltimore General Hospital from 1953 to 1954 and as resident in Internal Medicine at Church Hospital from 1954 to 1957 and then entered private practice.

In addition to his private practice, Dr. Yosuico is presently Director of Community Medicine at Church Hospital where he served as Chief of the Medical Staff, Chairman of the Medical Executive Committee, and member of the Board of Directors from 1981 to 1985. Other officers elected by the Society were **Israel H. Weiner** MD, President-Elect; **Hiroshi Nakazawa** MD, Vice-President; **Susan R. Guarnieri** MD, Treasurer; and **Joseph H. Hooper** MD, Secretary.

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MARCH 1987

VOLUNTARY PARTNER NOTIFICATION OF THOSE EXPOSED TO HIV INFECTED PERSONS

On February 11, 1987, the Department of Health and Mental Hygiene initiated the program for voluntary partner notification of those exposed to HIV infected persons. As stated in the January issue of the Maryland Medical Journal (MMJ), this program is directed at HIV positive persons seen primarily in the private health sector (i.e., physicians' offices, hospitals, drug treatment programs, etc.). Presently, the program materials are available through the Maryland State Department of Health, Laboratories Administration and the Maryland Medical Laboratories, who will automatically send a pocket brochure along with a positive HIV antibody test result to the submitting facility or physician. Those who choose not to use either of these laboratories to test for HIV antibodies can obtain these materials by contacting their local Health Officer or by calling Mr. James F. Coan, Jr., at (301)-225-6799. Requested information will be sent within twenty-four (24) hours of the call.

Since this program has been intitiated, there has been some criticism as to the timeliness of this activity. It has been suggested that it is a matter of too little, too late, and there are more serious issues to consider rather than a program to influence something that has already been ongoing for a while. Nevetheless, it is the position of the Division of AIDS Prevention that any activity which has the potential to reduce further the spread of HIV infection simply cannot come too soon, nor too late. Furthermore, since these materials have been developed to coincide with the physicians' counselling message and for the patient to use, there does not appear to be any reason to undermine the intent of this program.

The physician has a definite responsibility to assure that partners to HIV infected persons are notified. Any individual who the physician knows has been exposed to an HIV infected individual, whether sexual or parenteral, must be notified of that exposure. This can be accomplished either by the HIV positive person by agreement with the physician, or directly by the physicians themselves. Regardless, the physician has the responsibility to assure that the partner is notified of their exposure.

One of the aspects of the partner notification program is that it puts into the hands of the patient the means to accomplish the notification of their own partners whether the partner is known to the physician or not. Together with the encouragement and counselling of the physician, the materials will assist the patient in deciding how to notify, what to say, and where to obtain more information. Therefore, even though physicians have advised HIV positives to notify partners, the pocket brochure actually directs the patient how to notify.

Although partner notification is not a new concept, it is quickly becoming a most important issue to the medical community. "Duty to Warn" and "Duty to Protect" concerns as well as ethics place an increased reponsibility on the physician. Many experts suggest that counselling the patient to notify their partners themselves provides the best route to fulfilling the "Duty to Warn" the contact. The partner notification pocket folder will certainly assist this counselling and benefit both patient and physician.

In many areas of the State, there is a low frequency of HIV antibody positives. In these cases, the physician may find that the partner notification materials are particularly useful. By becoming familiar with the text in the brochure, the physician can better counsel an HIV positive and direct them to other support services which are available. Of course, this will include the motivation to voluntarily notify their sexual and/or needle sharing partners.

The final acknowledgement of the value of this program will certainly be in the judgement of those who use the partner notification materials. Please keep in mind that no literature is useful if it is not utilized, and of course, materials improperly used have limited value. The partner notification pocket brochure was designed for use by the patient and in conjunction with the counselling of the health care provider.

As always, your comments and suggestions are welcome. Please feel free to contact the Division of AIDS Prevention at (301)-225-6799 with your questions and input.

ESTIMATED CUMULATIVE NUMBER OF CASES OF AIDS, ARC/LAS, AND HIV ANTIBODY POSITIVE PERSONS IN MARYLAND 1986—1991

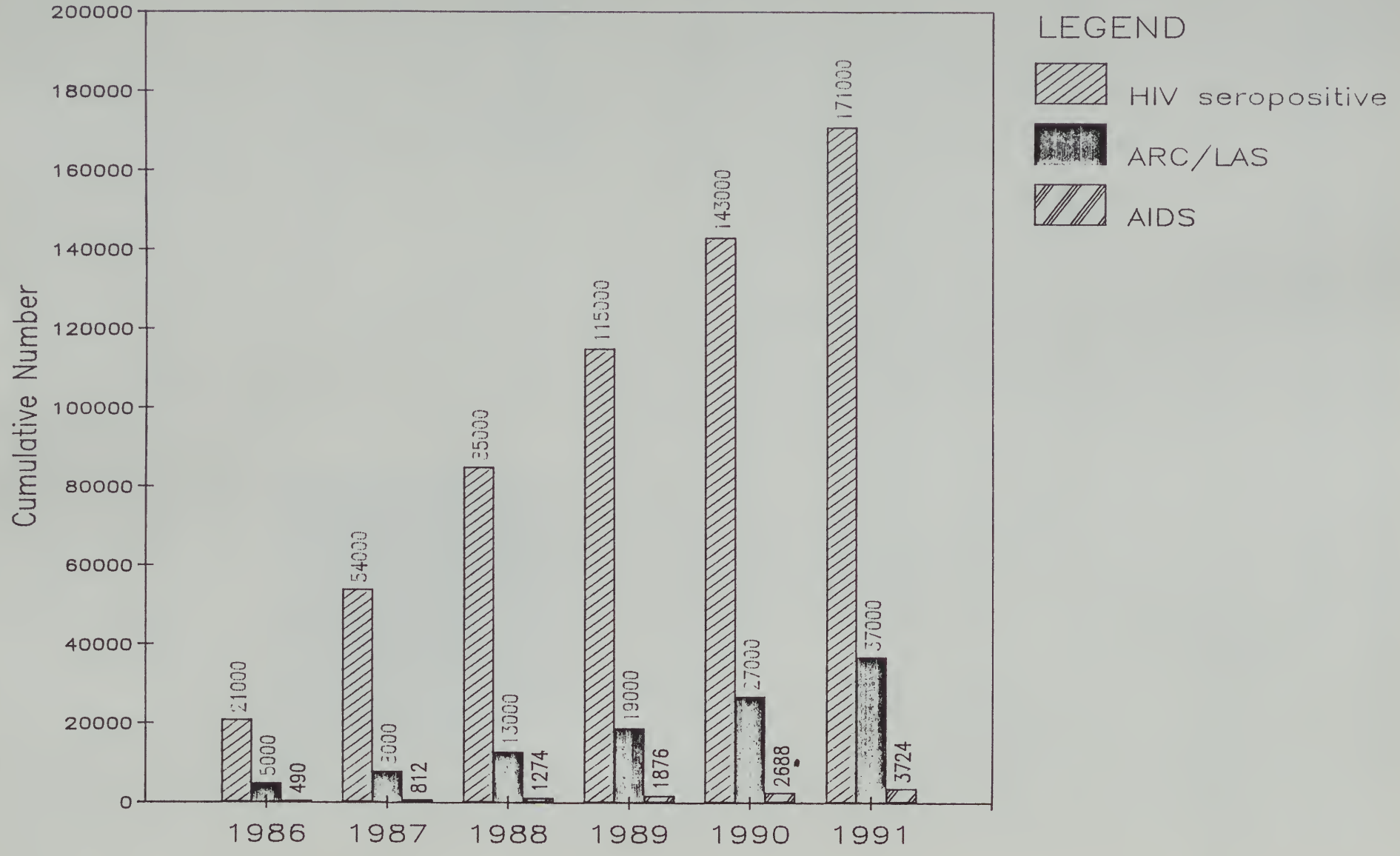


TABLE OF PROBABLE TUBERCULOSIS TREATMENT OVER PAST 30 YEARS

As we discussed in the February 1987 issue, the following is a summary table of probable anti-tuberculosis drug combinations used in Maryland for the treatment of tuberculosis patients during the 20th century:

1946 - 1952 The combination of SM plus PAS ran for a few months to several years.

1952 - INH introduced INH/PAS/SM - treatment generally lasted for years.

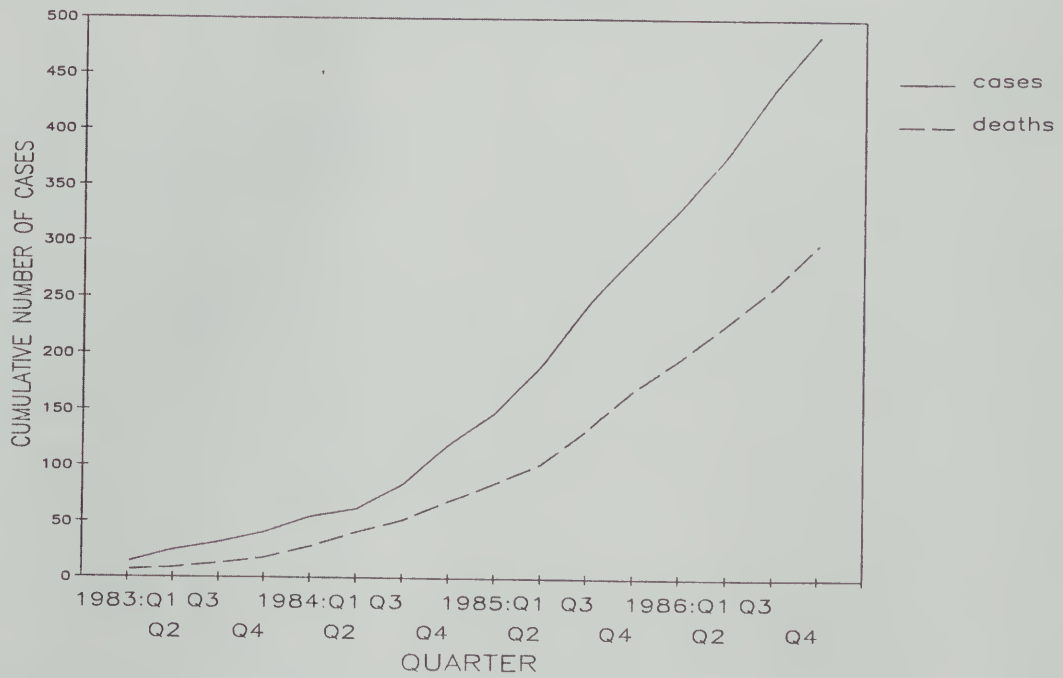
1967 - Ethambutol (Myambutol) (EMB) INH/EMB ± SM - treatment 2-3 years.

Resectional Surgery Continued Through the 1960's

1971- Rifampin introduced - not generally used a first line drug until middle 70's. Then INH/RIF with ± EMB or SM became treatment of choice. Duration of treatment reduced from 24 to 9-12 months. PZA also introduced in 1971 but not generally added to first line regimen until late 70's and early 80's. The addition of PZA and SM to INH/RIF allows six month supervised treatment in most patients.

AIDS UPDATE

CUMULATIVE NUMBER OF MARYLAND AIDS CASES AND DEATHS
BY QUARTER—YEAR OF DIAGNOSIS
1983 — 1986



Thanks to Jean Warthen and Charles Horton of the Ctr for Health Statistics

Alzheimer Disease. Meridian Healthcare is helping to do something about it.

As the largest provider of long-term nursing care in Maryland, Meridian Healthcare is in a unique position to exercise some leadership in developing new techniques for caring for Alzheimer victims. Even more important, we have made a commitment to actively assist with the search for a cure for this serious, terminal condition.

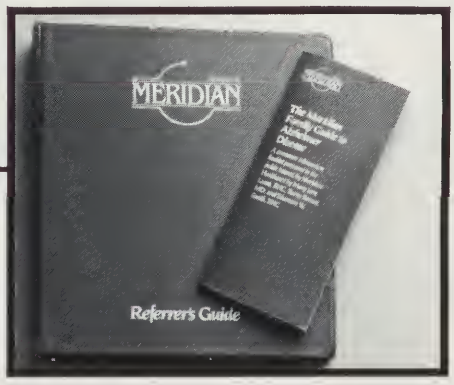
A specialty Alzheimer Disease Care Unit has been created at Meridian Nursing Center—Heritage in consultation with The Johns Hopkins University Medical Institutions to develop innovative approaches to care. To advance this research, Meridian funds an Alzheimer Disease Research Fellowship in The Johns Hopkins University Department of Psychiatry.

Alzheimer Disease is a little understood, even frightening facet of aging about which more public information is needed. To address this need, Meridian Healthcare has produced a booklet on Alzheimer. This guide will be offered free in commercial radio broadcast advertising as part of Meridian's continuing public information campaign.

Our concern with Alzheimer Disease is only one of many ways Meridian Healthcare is different. For more detailed information on our Alzheimer program or on any of our 13 Nursing Centers in Maryland, call or send the coupon for our free *Referrer's Guide*.

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301-296-1000



Meridian Healthcare
21 West Road
Baltimore, Maryland 21204

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Organization _____

For hospitals and PA's with need for more than one information kit, please indicate the number of additional kits needed _____.



On May 23, 1981, Evi Helga was pronounced legally dead. Today, she's beginning her second life.

Evi worried about her kids using drugs. So she always tried to set a good example for them. She never drank in front of them. And she never used marijuana.

Oh, there was an occasional tranquilizer to help calm her nerves. And pills to help her sleep. But she never worried about becoming addicted to prescription drugs.

Until the day her kids found her unconscious.

Since then, Evi has found the help she needed to start over again.

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Executive Director's Newsletter

March 1987

MARYLAND MAAC

The Faculty has received many calls from members questioning the accuracy of their Maximum Allowable Actual Charges (MAACs) as calculated by Maryland and Pennsylvania Medicare. In a meeting with the Liaison Committee with Third Party Payors on March 3, 1987, Maryland Medicare officials acknowledged a significant number of errors in the MAACs that have been calculated on 11,183 physicians and involve approximately 6,100,000 individual computations.

The problem appears to be widespread, and most complaints are with the carrier's records of physicians' charges during the profile period of April-June 1984. Many members do not understand why their MAACs are lower than their current charges - a situation that forces a "rollback" or reduction in fees. Keep in mind there are ONLY THREE SITUATIONS THAT COULD RESULT IN A ROLLBACK OF CURRENT FEES:

1. New physicians who went into practice after June 30, 1984 will be assigned the median customary charges for their services based on the fees customarily charged by established physicians in the area during the profile period. These charges may be lower than the physician's current fees. Medicare sets the customary charges in this case because the physician has no charge profile on record during the profile period.

2. Physicians who now offer services they did not offer or offered fewer than three times during the profile period are assigned median customary charges for the same reason as in the above case - because Medicare has no charge profile on record for those services. Again, the assigned charge may be lower than the physician's current charge.

3. Physicians who raised their fees for certain services near the end of the profile period decreased the MAACs for those services, since the median charges will fall somewhere in between the higher and the lower charge.

If you do not fall into one of the above categories, but your MAAC calls for a fee roll-back, then it is likely the carrier has erred. In this case contact Mike Murray at the Faculty office for further guidance.

EXTENDING DRGs TO RAPs

Once again, we urge all physicians to call the White House (202-456-7639) to express your concerns over President Reagan's 1988 budget proposal including a provision to extend Medicare's Diagnosis Related Groups (DRGs) to radiologists, anesthesiologists, and pathologists. Only a concerted effort by all physicians will be effective in stopping the implementation of this provision.

PEER REVIEW PROTECTION

The United States Department of Justice has informed the American Medical Association that peer review activities based on quality of care are pro-competitive and in no way violate antitrust laws.

LEGISLATIVE UPDATE

Med-Chi continues to support the tort reform legislation under consideration by the General Assembly. Hearings on both the statute of limitations and the collateral source rule have been held and the Committee votes are expected soon. In other areas, we are actively working to defeat legislation establishing mandatory assignment for Medicare, legislation that would collapse the malpractice insurance rates into four categories, and a bill that would allow optometrists to use diagnostic drops.

CONGRESSIONAL HEALTH AWARENESS TOURS

The Faculty is participating in this AMA-initiated project to expose members of Congress to the complexities of inpatient hospital care. Through this effort, the Faculty will endeavor to facilitate a greater understanding and awareness of medical care, particularly as it is provided by hospital-based physicians.

FEE GUIDE UPDATE

Last month, I informed you of Med-Chi's concern over the accuracy of the data listed in the Physicians Fee Guide, developed by the Attorney General's Office. During the past month, we have received many calls from Med-Chi members indicating that fees and telephone numbers listed in the guide are incorrect. Furthermore, physicians who were deceased or retired in 1985 are listed, while physicians who did treat Medicare patients and should be listed are not.

The Faculty has scheduled a meeting with the Attorney General to recommend that the data be studied further before releasing it to the public. We need your help to emphasize the extent of the problems mentioned above. If you have seen the fee guide and found errors in the data, please write to the Attorney General and send a copy of your letter to Med-Chi. The Attorney General's address is: Joseph Curran, Office of the Attorney General, Munsey Building, Calvert and Fayette Streets, Baltimore, MD 21202-1909. If you have not seen the guide, contact the Med-Chi library or your county medical society.

ANNUAL MEETING

The 189th Annual Meeting of the Faculty will be held Wednesday, Thursday, and Friday, April 29, 30, and May 1, 1987 at the Omni International Hotel in downtown Baltimore. Watch your mail for an advance program.

CPT-1987

Physicians' Current Procedural Terminology (CPT-1987) is available through Med-Chi. These codes are used by many private insurance Medicaid carriers as well as the federal government for Medicare, Part B. Price is $30 per copy. To order the CPT-1987, send a check made payable to the "Med-Chi Library" Attn: CPT order.

Angelo J. Troisi
Executive Director

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*48 month closed end lease. Plus applicable tax. Option to purchase at end of lease. For total of payments, multiply rental fee by 48.

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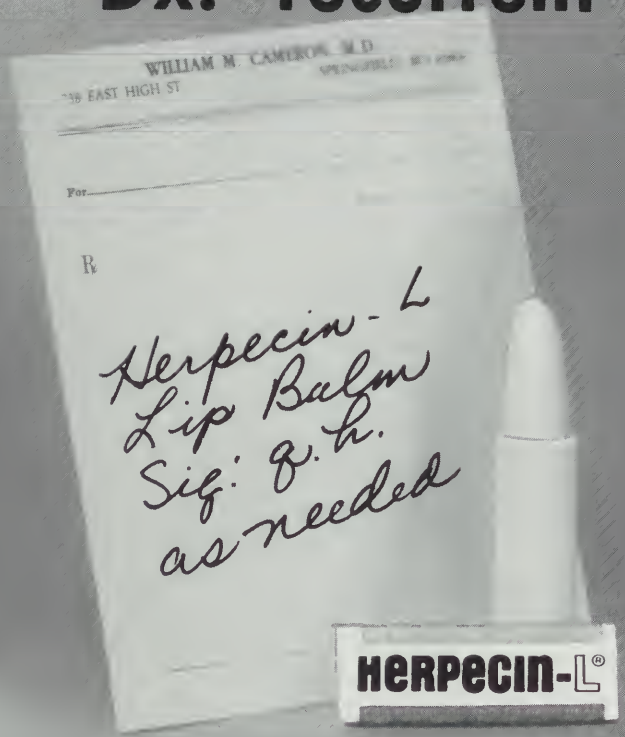
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In Maryland HERPECIN-L is available at all *Drug Fair, Revco and RiteAid* and other select pharmacies.

DEALING WITH THE IMPAIRED PROFESSIONAL:
Identification, Treatment, Prevention

April 10, 1987 Baltimore, Maryland

Schedule

7:30 - 9:00 a.m.
Registration and Continental Breakfast

9:00 - 9:15 a.m.
Welcome and Overview
Michael Hayes, M.D. and Robert K. White, M.A., C.A.C.
Conference Co-Chairmen

9:15 - 10:15 a.m.
***Keynote Address:* Impairment Among Professionals**
LeClair Bissell, M.D., C.A.C.

10:15 - 10:30 a.m.
Break

10:30 - 11:15 a.m.
Instituting Impaired Professional Programs
David I. Canavan, M.D.

11:
The Creative Use of the Recovery Model
John-Henry Pfifferling, Ph.D.

12:00 - 1:30 p.m.
Banquet Luncheon (included in participant fee)

1:30 - 3:00 p.m.
Concurrent Workshops: Session I

A. Special Issues of Professional Women
LeClair Bissell, M.D., C.A.C.

B. Drug Testing
David I. Canavan, M.D.

C. Risk Factors and Professional Impairment
Richard Kilburg, Ph.D.

D. Adult Children of Alcoholics: Recovery Issues in Impaired Professionals
Charles Whitfield, M.D.

E. Presenting a Therapeutic View of Alcoholism as a Treatment Strategy
Martin J. Valaske, M.D.

F. Psychiatric Impairment in the Professions
Joseph Chambers, M.D.

3:00 - 3:30 p.m.
Break

3:30 - 5:00 p.m.
Concurrent Workshops: Session II

A. Guidelines for Establishing a Hospital Wellness Committee
John-Henry Pfifferling, Ph.D.

B. Impaired Nursing Practice: Issues for the Nurse Administrator
Madeline A. Naegle, Ph.D., R.N.

C. Coping with the Stress of Malpractice
Edward G. Reading, M.Div., C.A.C.

D. Legal Issues of Impaired Professionals
Varda N. Fink, Esquire

E. The Impaired Social Worker
Paul Gunning, LCSW, C.A.C. and James Clements, LCSW

F. The Legal Profession's Response to Impairment: The Maryland Lawyer Counseling Program
Richard Vincent, C.A.C. and Honorable David Bates

G. Intervention Strategies with Impaired Professionals
Michael G. Hayes, M.D. and Robert K. White, M.A., C.A.C.

5:00 p.m.
Conference Adjournment

The Medical and Chirurgical Faculty of The State of Maryland

The Medical Mutual Liability Insurance Society of Maryland

Location:
Holiday Inn - Timonium Plaza
Baltimore, Maryland

Co-sponsored by The Health and Education Council, Inc., 7201 Rossville Boulevard, Baltimore, Maryland 21237 (301) 686-3610

Hotel Reservation Form

A block of rooms has been reserved at the Holiday Inn-Timonium Plaza for April 9, 1987 at a special convention rate for participants in this course. Rooms are guaranteed for reservations by March 27, 1987. After this date, rooms will be reserved on the basis of space availability. For further information contact the Holiday Inn-Timonium Plaza at (301) 252-7373.

Reservation for: _____
(name)

who will be attending The Health and Education Council course **"Dealing With The Impaired Professional: Identification, Treatment, Prevention."** The site is the Holiday Inn-Timonium Plaza on April 10, 1987.

_____ ( )
Address Tel. No. (Area Code)

_____
City State Zip

Arrival Date _____ Departure Date _____

_____ Single(s) at $78 (plus tax) per night for _____ nights.

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Mail this hotel reservation form to the Holiday Inn-Timonium Plaza, 2004 Greenspring Drive, Timonium, MD 21093. Attention: Reservation Desk.

Course Registration Form

(5812)

Dealing With The Impaired Professional: Identification, Treatment, Prevention

April 10, 1987

Holiday Inn-Timonium Plaza

Name _____

Social Security Number _____

Work Phone (area code) ( ) _____

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Clinical Area _____

Employer _____

Employer Address _____

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WORKSHOP CHOICES: Please make workshop choices for both sessions. Rank the workshops within each session in order of preference. Every effort will be made to place you in the workshops which you rank as #1 and #2.

Workshop Session I:

____ A ____ B ____ C ____ D ____ E ____ F

Workshop Session II

____ A ____ B ____ C ____ D ____ E ____ F ____ G

☐ My check or money order in the amount of $ _____ is enclosed.

Fee: $75.00 per person

☐ I do not wish to register for this conference but would like information on future courses and programs offered by The Health and Education Council. (Please complete course registration form and return to address below.)

Please make check or money order payable to **ECC/Health Education** and mail to The Health and Education Council, Inc., 7201 Rossville Boulevard, Baltimore, Maryland 21237. Phone: (301) 686-3610. Federal Payer ID# 52-0976598.

Sponsorship

This conference is co-sponsored by The Medical and Chirurgical Faculty of the State of Maryland, The Medical Mutual Liability Insurance Society of Maryland and The Health and Education Council, Inc. in cooperation with:

Maryland Academy of Physician Assistants
Maryland State Bar Association
Maryland State Dental Association
Maryland Nurses Association
Maryland Pharmaceutical Association
Maryland Podiatry Association
Maryland Psychological Association
Maryland Veterinary Medical Association
National Association of Social Workers-Maryland Chapter

Accreditation

PHYSICIANS: The Medical and Chirurgical Faculty of the State of Maryland designates this continuing education activity for 6 hours in Category I of the Physician's Recognition Award of the American Medical Association.

Registration Information

DATE: April 10, 1987

TIME: Registration and Continental Breakfast begin at 7:30 a.m. The conference will begin at 9:00 a.m. and adjourn at 5:00 p.m.

REGISTRATION FEE: $75 per person

LOCATION: Holiday Inn-Timonium Plaza
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(301) 252-7373

The Vicious Circle.

You know—perhaps firsthand—how treating a borderline patient can resemble a vicious circle. The harder you try to help, the more adamant, or even abusive, your patient becomes, until both of you are left frustrated and exhausted.

But how do you break the vicious circle? Changing therapists will only begin the cycle all over again. And a brief hospital stay usually produces only temporary improvement.

At Sheppard Pratt, our experience has shown that specialized inpatient treatment, coupled with the opportunity for longer hospital stay, may be the only effective way to attack the vicious circle at its very beginning: to root out and resolve the deep-seated problems underlying the patient's longstanding difficulties.

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The process is not easy. Serious personality disorders do not lend themselves to a "quick fix." But we are encouraged by the number of our patients who have, in time, broken out of the vicious circle.

If you would like to know more about the Sheppard Pratt approach to the borderline patient and other patients with severe personality disorders, contact Dr. Barry Rudnick, Admissions Officer, (301)823-8200. Sheppard and Enoch Pratt Hospital, P.O. Box 6815, Baltimore, MD 21204.



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Impaired Professionals

While alcoholism, drug addiction, and psychiatric illness are human problems, it was thought professional men and women were immune to them. Somehow their advanced training should have protected them from falling victim to these diseases. In reality, professionals have been found to be at greater—not lesser—risk for these problems. Although the reasons are not yet clear, studies consistently have shown a higher incidence of alcohol, drug abuse, and psychiatric problems among the professional ranks than among the general population.

Ironically, the denial so common to these diseases is stronger in the professions. Perhaps intellectual pride, fear of being stigmatized, and an insidious enabling system conspire to make the professional person even more resistant to efforts to identify and treat the problem. The sad fact is that unless these diseases of impairment are treated properly, they usually wreak havoc on the person's life and can be fatal.

The good news is that the professions are becoming more and more willing to deal with these problems in an effective manner. Most professional groups now have committees and programs that are beginning to identify and treat their impaired colleagues before the damage from their disease is too great. Hundreds of successful recoveries have occurred because of these efforts. However, much more needs to be done because we have only touched the tip of the iceberg.

In Maryland, the professions have joined to form an interdisciplinary committee to support the development of these programs. The purpose of this group is to learn from each others' experience, to promote awareness of these activities, and to offer educational conferences. The April 10 conference, "Dealing with the Impaired Professional," is the first attempt in Maryland to offer an education and training event that would appeal to the wide range of people concerned with this issue. It is hoped that this conference will serve to build support for these committees and promote understanding of their effectiveness.

This issue of the *Maryland Medical Journal* is meant to serve as a resource document for persons and organizations interested in learning more about the problem of impairment and about effective strategies for intervention. It is dedicated to Joseph Chambers MD, whose efforts over the last eight years as Chairman and Consultant to the Committee on Physician Rehabilitation and as a private practitioner in the field of chemical dependency have helped hundreds of impaired professionals recover from their disease.

Special thanks goes to the members of the Impaired Professionals Committee for their help and ideas in planning the conference and this issue:

JUDGE DAVID BATES
WALTER TABLER, Esq.
RICHARD VINCENT CAC
Lawyer Counseling Program

GRADY DALE EdD
Committee on Distressed Psychologists

PHILIP NOLAN DDS
KEN DEACON DDS
Impaired Dentist Committee

MARIE MCCARTHY RN, MS
DONNA DORSEY RN, MS
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HARRY FINK PD
GILBERT COHEN PD
Pharmacist Rehabilitation Committee

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JAMES CLEMENTS MSW
Committee on Impaired Social Workers

DAVID TAYMAN DVM
F. M. GARNER DVM
STEVEN SERANGER DVM
Committee on Impaired Veterinarians

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REVEREND WILLIAM LOWRY
Alcoholism Committee, Episcopal Diocese

BRIAN KASHEN DPM
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Committee on Impaired Podiatrists

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ROBERT K. WHITE MA, CAC
Program Director
Physician Rehabilitation Program



MICHAEL G. HAYES MD Chairman
Committee on Physician Rehabilitation

Resource List for Impaired Professionals

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Alcohol and Substance Abuse Committee
Episcopal Diocese (Ecumenical)
P.O. Box 222
Joppa, MD 21085
301-679-8700
Reverend Michael Rokos, Chairman

Dentists
Committee for Rehabilitation of Dentists
Maryland State Dental Association
6470 Dobbin Road
Columbia, MD 21045
301-964-2880
Toll-Free: 1-800-492-3678
Hot Line: 301-964-2275
Philip Nolan DDS, Clinical Coordinator

Lawyers
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Maryland State Bar Association
Maryland Bar Center; 520 West Fayette Street
Baltimore, MD 21201
301-685-3993 or 685-7878
Toll-Free: 1-800-492-1964
Richard Vincent BA, CAC, Director
(Full-time staff)

Nurses
Impaired Nurse Committee
Maryland Nurses Association
5820 Southwestern Boulevard
Baltimore, MD 21227
301-242-7300
Marie McCarthy RN, MS, Chairperson

Physicians
Committee on Physician Rehabilitation
Medical and Chirurgical Faculty of Maryland
1211 Cathedral Street
Baltimore, MD 21201
301-539-0872
Toll-Free: 1-800-492-1056
Hot Line: 301-727-0120
Robert K. White MA, CAC, Program Director
(Full-time staff)

Physician Assistants
Committee on Impaired Practitioners
Maryland Academy of Physician Assistants
P.O. Box 20277
Baltimore, MD 21284
301-337-5654
George Prudden PA-C, Chairman

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Pharmacist Rehabilitation Committee
Maryland Pharmaceutical Association
650 West Lombard Street
Baltimore, MD 21201
301-727-0746
Tony Tommasello PD, President

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Impaired Podiatrist Committee
Maryland Podiatry Association
1729 Glastonberry Road
Potomac, MD 20854
301-424-1000
301-764-7044
Brian Kashan DPM, Chairman

Psychologists
Committee on Distressed Psychologists
Maryland Psychological Association
1000 Century Plaza; Suite 123
Columbia, MD 21044
301-992-4258
Grady Dale EdD, Chairman

Social Workers
Committee on Impaired Social Workers
c/o Family and Children's Services
of Central Maryland
204 West Lanvale Street
Baltimore, MD 21217
301-669-9000
301-269-4075 (urgent, evenings, weekends)
James Clements LCSW, Contact Person

Veterinarians
Impaired Veterinary Committee
Maryland Veterinary and Medical Association
10788 Hickory Ridge Road
Columbia, MD 21044
301-730-2122
301-461-2280
David Tayman DVM, Chairman

Impaired Health Professionals: State of the Art

EMANUEL M. STEINDLER MS

Patients' welfare is the reason for the existence of the impairment program of any health profession. Beyond that, physicians believe that insofar as they have a managerial stake in the total health care of patients, they have a vital interest in the competence of professionals other than physicians who contribute to that care. Most professionals also would agree that saving the lives of colleagues and restoring them both personally and professionally to good health are of equal importance.

Steindler is Executive Director, American Medical Society on Alcoholism and Other Drug Dependencies.

Another landmark was reached when the American Medical Association held its seventh national conference on physician impairment in Chicago. There had been increasing recognition at previous conferences of the importance of interprofessional relationships and responsibilities, but last year's conference marked the beginning of cooperation among health professionals on this particular issue. The theme was "Impairment and Well-Being of Health Professionals: A Family Affair," and joining the AMA in convening it were national associations representing the professions of nursing, dentistry, veterinary medicine, podiatry, and pharmacy. These associations encouraged their members to attend and to share ideas, viewpoints, and experiences.

Although physicians were the first health professionals to take organized action in this arena, all health professionals now recognize they have much to learn from each other on how to establish, fund, and operate programs; how to involve and motivate volunteers; how to confront and at the same time be advocates for impaired colleagues; and how to relate to state licensing authorities. Thus, the phrase "family affair" referred to the opportunities for interdisciplinary cooperation among the health professions as well as to the dynamics of the role of family members in the development, diagnosis, and treatment of impairment in affected individuals.

The contribution of other professionals to the identification, treatment, and recovery of impaired physicians has long been recognized by the medical community. This is particularly true vis-a-vis the nursing and pharmacy professions, whose members work closely with physicians in the hospital setting. Beyond that, physicians believe that, insofar as they have a managerial stake in the total health care of patients, they have a vital interest in the competence of professionals other than physicians who contribute to that care.

The welfare of patients is the reason for existence of the impairment program of any health profession. Most professionals also agree that saving the lives of colleagues and restoring them to good health both personally and professionally are of equal importance.

There are two additional reasons for a profession to sponsor and actively implement an impairment program for its members. One is to assert and actualize an essential constituent of professionalism: assuring the competence and reliability of practitioners so that the art and science of the profession are maintained and enhanced. The second reason is to preserve the considerable investment society has made in the training of each professional. This is most evident in the long and expensive process of medical education but is also applicable to the training of other health professionals.

What follows is drawn chiefly from experience in the impaired physician programs of state medical societies. Other professions already have faced or will shortly come to face similar questions and issues.

Definition of Impairment

The AMA uses the term "impaired physician" to identify those members of the medical profession whose professional performance is adversely affected by reason of mental illness, alcoholism, or drug dependence. It is a narrow definition, because it excludes physical illness, criminal and unethical behavior, and incompetence. It is not the *most* narrow definition employed today, however; several entities that deal with impairment, including some state medical societies, devote most if not all of their attention to chemical dependence. They cover psychiatric problems only when they are associated with alcoholism or drug addiction.

Implicit in AMA's definition is the recognition that either drug and alcohol dependence or psychopathology almost always interferes with the ability of an affected physician to evaluate whether he or she is capable of carrying out professional duties.

From the common threads of the high degree of denial and the inability to self-evaluate that characterize such disorders is woven the entire fabric of physician impairment intercession: a systematic structured way to act in behalf of colleagues who are unable to perceive accurately either the nature of their illness or its consequences.

This is not to say that impairment programs do not try to identify and treat *incipient* alcohol or drug-abuse

problems before they progress to the point where practice is affected or honest self-assessment is impossible. But if that were all the program sought to accomplish, it would not be dealing with the central issue of *existing* impairment.

State Medical Societies

Every state medical society now has stated policy and a committee on physician impairment.

Most state programs today do not exclude the psychiatrically impaired, but some do not give this area the same degree of attention they give substance abuse. A program just starting may wish to limit itself to chemical dependence, where the bulk of impairment seems to be lodged. The incentive for establishing a program may come from those very physicians who themselves are recovered alcoholics or addicts, and who, by virtue of providing leadership, determine the program's scope. A new program desiring to demonstrate its value may shun exclusively psychiatric cases because they can be more difficult to detect and treat successfully.

In an AMA survey last year, responses from 30 state society programs revealed that two-thirds do handle some cases of major psychiatric disorders, such as depression. But it was clear that overall the concentration continued to be on substance abuse and dependence.

Are programs that do not place sufficient emphasis on "psychiatric impairment" fully meeting their professional obligations to uphold the quality of patient care? Some observers believe they are not and suggest that to do so these programs must first amend their policy statements regarding scope to explicitly include primary psychiatric disorders. Next the program should begin to develop and apply outreach and intervention strategies comparable in sophistication to those in place for alcoholic and addicted colleagues.

A comprehensive state program will undertake a full range of functions. Case finding is facilitated through ongoing education and publicity within the medical community and in the public media. Often the medical society auxiliary plays a key role. There is a mechanism for identifying or reporting impairment problems, such as a hot line, and for verifying reports when they are made.

Confronting the impaired physician is typically undertaken, through one or more visits, by a team of two trained intervenors, one of whom has recovered from the disorder that the affected physician has been identified as having. The physician will be persuaded to undergo diagnostic workup and enter treatment appropriate to his or her condition. Wherever feasible the spouse or family members, close colleagues, or friends will be involved in the intervention process.

The state society itself will not operate treatment programs but will have identified relevant resources both within and outside the state. Sometimes, it is advisable for physicians to be treated outside their own community and, depending on the size of the state, to go to an out-of-state facility.

If there is reason to believe that the physician's disorder is of a nature and degree of severity to interfere with professional duties, there is an attempt to persuade him or her to suspend practice until such time as he or she has completed treatment. If the physician refuses to do so, the state society can refer the matter to the state licensing authority for official investigation and disposition.

Following treatment, and assuming it is successful, the state society's program will monitor the physician's recovery and help him or her resume practice or to find other employment. It will continue to serve as the physician's advocate, when necessary.

Finally, a comprehensive state program will establish an ongoing liaison with state regulatory agencies, with other professional societies, and with hospitals and medical schools in the area. It also will keep adequate records so that it can quantify and evaluate its various functions.

Although some programs have attained a high degree of complexity, most have not. The concern is that few additional programs, without dedicated staff and sufficient budgets, will be able to do so in the future.

Fortunately, there is a trend, especially among the larger state societies, to hire physicians as medical directors for their impaired physician programs, either on a full- or part-time basis, and to retain other competent and experienced staff whose sole duties are in program administration. Funding, however, is a key to this and other aspects of a program. In the AMA study, seven states indicated no specific budget for their impaired physician programs and of those that did the amount ranged from $500 to $233,000 per year.

Model Legislation

The AMA has written and disseminated two pieces of model state legislation dealing with physician impairment. The first, in 1972, called the Disabled Physician Act, amends medical practice statutes by giving examining boards a range of disciplinary and therapeu-

tic options in handling impaired physician cases. Principal features of the act have been adopted in more than 30 states.

The second model, developed in 1985, incorporates major provisions of the first and goes much farther in establishing explicit cooperative relationships between the state regulatory body and the medical society.

The Model Impaired Physician Treatment Act provides for funding of administrative expenses of the medical society's program, and mandates reporting of names of impaired physicians by the society only when impairment constitutes a danger to the public.

The bill clearly distinguishes impairment, caused by alcoholism, drug abuse, or mental illness, from professional incompetence, and it stipulates that physicians who participate in or who have successfully completed treatment for their impairing illnesses shall not be excluded from membership on a hospital medical staff solely because of such participation. Other major provisions include:

1. Recognition by the regulatory board that the state medical society's program is the appropriate referral service for disposition of those cases that come to the board's attention and require therapeutic handling.
2. Periodic joint review, by the board and the society's program administrators, of impaired physicians' cases, with confidentiality of physicians' names assured.
3. Sharing the society program's statistical information with the board.
4. Immunity for the medical society and its members for their actions in carrying out program functions.

Research

The AMA shares with other professional associations an interest in promoting sound research on all aspects of impairment. It has held two research conferences to examine what was being done in the field and to define areas that needed more attention.

An area that seems to be of uppermost concern is that of incidence and prevalence. We can look at the demographics of impairment, we can examine prevalence by medical specialty, we can evaluate treatment modalities on at least a quantitative basis, and we can share information with other investigators. But before we can do any of these things, before a central repository can come into being, the medical societies themselves must develop their own research capabilities and agree to adhere to common guidelines for data collection and transmittal.

Well-designed and meaningful research on physician impairment should be undertaken not only by medical societies but also by treatment programs, medical schools, and hospitals. Much of the work reported to date has been what may be called "by-the-way" research: retrospective looks (without adequate controls) at one's own programs or perhaps the programs of others, as if one were glancing up from hands-on care and saying "by the way, we should be evaluating and reporting on what we are doing."

Ideally, clinicians and program administrators should work closely with professional epidemiologists and methodologists so that future research can have the validity, reliability, and relevance necessary for effective planning and practical decision making.

Issues for the Future

Perhaps the most crucial issue for the years ahead is how to obtain information that is well-documented and clinically applicable so that we can continue to improve our programs. We cannot ignore confidentiality, but neither can we allow overconcern about protecting the identity and privacy of our impaired colleagues prevent the collection and analysis of data that will show us how we can be of greater help to these colleagues in the future. Collecting data and conducting research need not be incompatible with maintenance of confidentiality.

Another deficit to be overcome in the future is the attention, or lack of it, that impaired members of minority groups receive. The minority status of blacks, Hispanics, native Americans, Orientals, and gays combines with impairment to intensify reluctance to seek help from mainstream professional societies.

Multisponsorship of programs should be explored, especially in states that are rural, geographically large, and with relatively few health professionals. Interdisciplinary programs there are almost essential to achieving the "critical mass" needed for effective operation.

As programs mature and more impaired individuals complete treatment, problems of reentry increasingly will come to the fore: the suspicion of colleagues, coworkers, and patients; deficiencies in continuing education; personal financial difficulties; and relapse. Ongoing support and advocacy must be solidly built into our programs as are mechanisms for detection and intervention. We must assert our determination to overcome the stigma too often attached to professionals and nonprofessionals who have alcoholism, drug dependence, or mental illness.

As difficult as it is today to erase stigma, it may become more difficult in the future. The surplus of professionals in some areas is sharpening competition to where saving impaired colleagues may no longer be seen as a high priority by many practitioners.

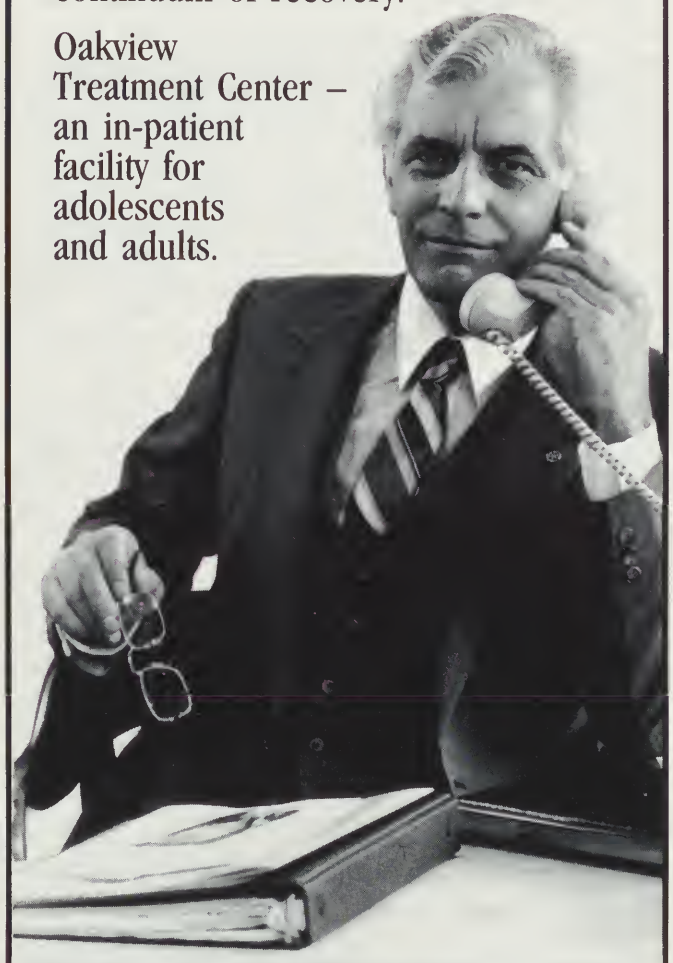
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The pendulum may swing toward a more punitive climate. In such a climate, it will be difficult for impaired professional programs to maintain a balance between concern for colleagues as human beings and concern for public safety. To counter the push toward punition some programs may even overemphasize treatment and recovery and downplay their responsibility to assess ability to practice. Nevertheless, maintain the balance they must, even at the risk of playing into the hands of those who wish to ignore therapeutic aspects altogether, or who strive to erase the boundaries between impairment, incompetence, and illegal behavior.

For to do otherwise would be to forget that at the core of our programs to restore our members lies the caliber of our professionalism, and that the ethical nature of our performance will be critically evaluated as we take the necessary steps not only to promote the well-being of our colleagues but also to safeguard the health of the patients they seek to serve.

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The Physician Rehabilitation Program of Maryland

ROBERT KANE WHITE MA and MICHAEL GILBERT HAYES MD

The Physician Rehabilitation Program of Maryland has been developed by Med-Chi's Committee on Physician Rehabilitation over the last nine years. Its primary purpose is to assist physicians who are experiencing problems because of alcoholism, drug addiction, or psychiatric illness. Over 300 reports have been made to the program, and over 100 cases have achieved a stable recovery. Reports made to the program are strictly confidential. Advocacy for the recovered physician is a major priority. The treatment and monitoring phases of the program may last five years.

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The Committee on Physician Rehabilitation was formed in 1978 as the result of a growing awareness on the part of the Maryland's medical community that no formal mechanism existed to adequately treat physicians who were alcoholic, drug addicted, or psychiatrically impaired. The various disciplinary and medical review bodies (such as the Commission on Medical Discipline, the State Board of Medical Examiners, the Peer Review Committee, the Physician/Patient Relations Committee, and the Committee on Drugs) had long been aware that many of the physicians who were reported to them had problems these groups were not equipped to address.[1]

In 1973, the AMA Council on Mental Health had published the landmark article, "The Sick Physician,"[2] which provided the official endorsement for state medical societies to form impaired physician committees to properly handle these cases. In so doing, the Council cited two primary responsibilities of organized medicine:

- To ensure safe and competent patient care
- Concern for the welfare of the sick physician and his family

This report laid the necessary groundwork for the formation of such committees. As of 1984, every state medical society in the country had formed a committee for these purposes.[3]

The Med-Chi's Committee on Physician Rehabilitation has gradually developed an active, effective program over the last nine years. The number of reports per year has increased from 35 to about 70. The number of active cases has grown to over 100. A full-time program director was hired in 1985 to ensure continuity and to provide much-needed manpower. Funding was obtained from the Medical Society and more recently from Med Mutual. Over 100 physicians are classified as having achieved a stable recovery from their illness. The majority of these have returned to practice as healthy, competent physicians.

Misconceptions

Over the years it has become evident that certain misconceptions about the Physician Rehabilitation Program prevent the medical community from using it fully. The primary misconception is that reporting a physician to the program will harm the individual in some way. This is not true.

The program is confidential, nondisciplinary, and supportive. The goal of the program is to identify and treat physicians who are sick and need help.

The real harm is caused by not reporting individuals because this allows their disease to progress unchecked.

Another misconception is that a person who is alcoholic or drug addicted can only be helped if they "hit bottom" and want to be helped. These attitudes are reflected in society as a whole. They are caused by the underlying assumption that chemical dependency is a moral problem that is a matter of choice for the individual. The hope is that the individual will decide to change spontaneously and mend his or her ways. Unfortunately, the chemically dependent individual *is not capable of such a choice.* Denial, the most prominent feature of the disease, acts to block any effective change in behavior. Years of research and experience have shown that a chemically dependent person will respond to outside intervention when it is offered in a firm, nonjudgmental, and compassionate manner.[4,5]

A third misconception has to do with the concept of "impairment." Many people believe that if a physician is impaired it will necessarily be reflected in his practice. This is not always true. The job is usually the last area of a person's life to be affected by addiction. Family life, social relationships, and self-esteem can be destroyed before job performance is affected.[6] To illustrate this point, consider the fact that in the past this committee had referred noncompliant individuals who were clearly alcoholic or drug addicted to the Peer Review Committee for review of their practice only to receive a report that there was no evidence of impairment. This

occurred because their disease had not progressed to the point where it had affected their practice in an observable way. Signs and symptoms of impairment are present in the home and community long before they can be detected on the job.

Key Elements

Confidential Names reported to the Physician Rehabilitation Program are not revealed to anyone except those involved directly in the case. Typically, the Chairman and the Program Director are the only people who are aware of the report. Other members of the Committee are only included if they play a role in the intervention or monitoring of the physician/client. Names are not discussed at committee meetings and only program staff has access to the files. In addition, Maryland Law protects the confidentiality of these records.[7]

Names of people who report impaired physicians are closely guarded as well. The program policy is to never reveal sources of information to anyone. On occasion the "reporter" will confide to the physician being reported, but under no circumstance will the program reveal that information. Some "reporters" have chosen to remain anonymous even to the program staff. This is a more difficult situation to verify, but not impossible. As long as there is a reasonable amount of objective information regarding the nature of the impairment, we can justify having an informal, confidential meeting with the physician/client to discuss the alleged problem.

Nondisciplinary Unfortunately, there is a common misconception that this program is a disciplinary body that will take a physician's license first and ask questions later. In fact, the program is concerned with helping "sick" people get well. It is not concerned with punishing "bad" physicians. The Commission on Medical Discipline, a state agency, handles the disciplinary cases for Maryland. On the rare occasion when this program refers a case to the Commission, it is only after every reasonable attempt has been made to convince the person to comply with treatment and a majority of the Committee members approve of the referral.

Effective The Physician Rehabilitation Program has documented over 100 recoveries. This is an impressive number when one considers the enormous value and significance when a single physician recovers from a devastating illness such as chemical dependency. Not only does the individual benefit, but so do his family, friends, patients, community, and profession. It is especially tragic when a physician dies from a treatable disease because no one took the time to make a phone call.

Advocacy The program acts as an advocate for the physician/client with respect to the Board of Medical Examiners, the Commission on Medical Discipline, Hospital Credentials Committees, Malpractice insurers, and potential employers. Over the years we have developed a good relationship with these groups because of the number of physicians who have achieved stable recoveries. It is especially rewarding to report that many physicians who are already in recovery have become participants in the program in order to gain the credibility and advocacy of the program.

The Program

There are four phases to the program: investigation, evaluation, treatment, and monitoring.

Investigation begins after the report is received. Initial information is collected, and discreet inquiries are made. An attempt is made to verify the report from several different sources. If we can determine that different sources are observing the same problem, we can be more certain there is an actual impairment. For example, if we receive a report from a patient, we try to verify its accuracy by calling other physicians who would be in a position to know about a potential problem. The major sources of information are physicians, patients, nurses, administrative staff, and family members. The greatest number of reports come over the phone from physicians concerned about their colleagues. Other sources of information include the Commission on Medical Discipline, newspaper articles, and self-referral. Anonymous reports are accepted, but must be verified carefully.

The important aspect to note about this phase is that investigations are done quietly, cautiously, and with a great degree of sensitivity to the identified physician's feelings and reputation.

The second phase of the program is the **evaluation**. When enough information is gathered to verify the accuracy of the report, an informal and confidential meeting is arranged with the identified physician at a mutually convenient location. Usually, only the Committee chairman and program director are present during the initial evaluation, but other members of the Committee may be included if appropriate. If the suspected problem is psychiatric, for example, a psychiatrist member of the Committee may be invited to the initial meeting. The purpose of this phase is to further determine if, indeed, there is a problem that needs attention. In some cases it is blatantly obvious there is

a problem, and the appropriate referral is made. In other cases it is not clear from the available data that a problem actually exists. Many of these cases are referred to consultants for a second opinion. Usually, one outside consultation is sufficient to produce enough objective data to resolve the question of impairment. If the results of the evaluation process clearly indicate a problem, appropriate referral is made. If the results of the evaluation process are inconclusive or clearly show no problem exists, then the case is either dropped from active status or held open for continued monitoring. It is important to note that in any case where the individual resists treatment, the program relies on objective information to verify the diagnosis.

In the case of a senile or cognitively impaired physician, the goal of the evaluation process usually is to determine whether the individual is competent to practice medicine or should be referred to treatment. The program relies on the results of neuropsychological testing, practice competence examinations, and the recommendations of the Peer Review Committee for direction in these cases. If a physician is found to be incompetent because of senility or cognitive impairment, every effort is made to encourage the individual to retire.

The standard length of the **treatment phase** of the program is two years, but it may be extended indefinitely if necessary. In addition, the monitoring phase is three years in length, which means the total length of the program is five years.

In the treatment phase of the program, the physician/client is referred to an appropriate treatment provider. Some choice usually is given to the individual regarding the actual provider. The standard treatment plan for a chemically dependent (alcoholic or drug dependent) physician includes these options: (1) 30-day residential program; (2) two-year outpatient group, once per week; (3) random, observed, weekly urine screens; (4) regular attendance at AA or NA meetings; (5) family counseling, and (6) supportive psychiatric counseling. (Some combination or all of these options may be used depending on the nature and seriousness of the addiction.)

Psychiatric cases vary widely in terms of treatment specifics, but some of the standard options include (1) inpatient treatment of varying length, (2) outpatient treatment, usually individual sessions with psychiatrists, (3) group therapy, and (4) medication, such as Lithium and antidepressants.

When an impaired physician has a dual-diagnosis (chemically dependent with psychiatric illness), some blending of the treatment options usually results. For example, an alcoholic, manic-depressive may be treated with lithium while attending AA meetings and group therapy.

The Physician Rehabilitation Program offers interest-free loans to physicians who cannot afford the cost of treatment. It is ironic that many physicians do not have proper coverage for chemical dependency, psychiatric treatment, or basic health benefits. Over 40 loans have been made in the past nine years. In many cases it was clear that without the financial assistance of the program, the physician/client would not have received proper treatment. It should be noted that the Maryland's Medical and Chirurgical Faculty was the first in the country to offer this service and is still only one of a handful of states that has a substantial loan program.

Once treatment is completed, the physician/client enters the **monitoring** phase of the program. Actually, the individual is assigned a physician-monitor at the beginning of the treatment phase, but the treatment-provider acts as the primary source of information regarding the individual's ongoing status. The monitor's role becomes more significant after the treatment phase is completed because the monitor becomes the main source of information regarding the individual's continued recovery.

Should a problem arise during this period, the monitor (who is usually a member of the Committee) can notify the chairman or program director in order to assist the individual in the best way possible. The monitoring period may extend three years past the completion of treatment and generally consists of 3 to 12 face-to-face contacts per year.

In Table 1 the number of reports per year are divided into four categories of primary impairment. The most frequent cause of impairment is alcoholism (47 percent). Drug addiction and alcoholism combined make up 78 percent of the total. Psychiatric illness represents 20 percent of the reports. These percentages are very similar to reports by other states.[8] A very small percentage have to do with some sort of physical disability such as vision impairment or palsy (2 percent). The total number of reports to the Committee has grown to 342 as of December 31, 1986.

As shown in Table 2, the active caseload has grown to 137 physicians. Roughly, one third are represented in the first two phases. Phase 3 and Phase 4 account for a third each. It is expected that as the number of reports per year increase the number of active cases will increase as well. This is good news in the sense that the program is identifying and treating more physicians that need help, but it also represents a challenge to provide increased services.

Role of the Auxiliary

The Auxiliary of Med-Chi has maintained a supportive role to the Committee on Physician Rehabilitation

Table 1. Number of Physicians Reported by Year and Type of Primary Impairment

Primary Impairment	1978	1979	1980	1981	1982	1983	1984	1985	1986	Total	Percent
Alcoholism	15	18	15	26	18	13	11	18	25	159	47
Drug addiction	15	9	11	4	9	7	12	9	29	105	31
Psychiatric illness	8	8	5	4	7	10	9	8	12	71	20
Physical disability	1	0	0	1	0	0	0	1	4	7	2
Total	39	35	31	35	34	30	32	36	70	342	100

from the outset. In fact, the bylaws provide for an Auxiliary Representative on the Committee. Mrs. Hazel Chambers, the representative for many years, promotes awareness and functions as a resource to the families of the physician/clients. In addition, the Auxiliary has collaborated on seminars and conferences with the Committee. The importance of the Auxiliary to the effectiveness of this program cannot be overstated because the spouse is usually the first person to recognize that a physician may have a problem. The spouse can be the most significant person to be involved in the process of intervention. When the spouse becomes committed to the idea of treatment for the physician/client, the chances for a full recovery are much greater.

In summary, the Committee on Physician Rehabilitation has evolved over the last nine years into an active, effective program to help impaired physicians. It is a confidential, nondisciplinary program primarily interested in helping sick physicians get the help they need to return to practice as healthy, competent doctors. It is hoped that more and more people will recognize their responsibility to help an impaired physician receive the assistance that he (or she) needs to recover from their disease.

Physician Rehabilitation Program
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Table 2. Active Cases

Program Phase	Number	Percent
Investigation	34	25
Evaluation	6	4
Treatment	50	37
Monitoring	47	34
Total	137	100

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Hotline Numbers for Impaired Professionals
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INDERAL LA should not be considered a simple mg for mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to INDERAL LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, INDERAL LA has been therapeutically equivalent to the same mg dose of conventional INDERAL as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure and rate pressure product. INDERAL LA can provide effective beta blockade for a 24-hour period.

The mechanism of the antihypertensive effect of INDERAL has not been established. Among the factors that may be involved in contributing to the antihypertensive action are (1) decreased cardiac output, (2) inhibition of renin release by the kidneys, and (3) diminution of tonic sympathetic nerve outflow from vasomotor centers in the brain. Although total peripheral resistance may increase initially, it readjusts to or below the pretreatment level with chronic use. Effects on plasma volume appear to be minor and somewhat variable. INDERAL has been shown to cause a small increase in serum potassium concentration when used in the treatment of hypertensive patients.

In angina pectoris, propranolol generally reduces the oxygen requirement of the heart at any given level of effort by blocking the catecholamine-induced increases in the heart rate, systolic blood pressure, and the velocity and extent of myocardial contraction. Propranolol may increase oxygen requirements by increasing left ventricular fiber length, end diastolic pressure and systolic ejection period. The net physiologic effect of beta-adrenergic blockade is usually advantageous and is manifested during exercise by delayed onset of pain and increased work capacity.

In dosages greater than required for beta blockade, INDERAL also exerts a quinidine-like or anesthetic-like membrane action which affects the cardiac action potential. The significance of the membrane action in the treatment of arrhythmias is uncertain.

The mechanism of the antimigraine effect of propranolol has not been established. Beta-adrenergic receptors have been demonstrated in the pial vessels of the brain.

Beta receptor blockade can be useful in conditions in which, because of pathologic or functional changes, sympathetic activity is detrimental to the patient. But there are also situations in which sympathetic stimulation is vital. For example, in patients with severely damaged hearts, adequate ventricular function is maintained by virtue of sympathetic drive which should be preserved. In the presence of AV block, greater than first degree, beta blockade may prevent the necessary facilitating effect of sympathetic activity on conduction. Beta blockade results in bronchial constriction by interfering with adrenergic bronchodilator activity which should be preserved in patients subject to bronchospasm.

Propranolol is not significantly dialyzable.



INDICATIONS AND USAGE. Hypertension: INDERAL LA is indicated in the management of hypertension; it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. INDERAL LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: INDERAL LA is indicated for the long-term management of patients with angina pectoris.

Migraine: INDERAL LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

CONTRAINDICATIONS. INDERAL is contraindicated in 1) cardiogenic shock; 2) sinus bradycardia and greater than first degree block; 3) bronchial asthma, 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.

WARNINGS. CARDIAC FAILURE: Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or INDERAL should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following abrupt discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (e.g., chronic bronchitis, emphysema) — PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY: The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, e.g., dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA: Beta-adrenergic blockade may prevent the appearance of certain premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia in labile insulin-dependent diabetes. In these patients, it may be more difficult to adjust the dosage of insulin.

THYROTOXICOSIS: Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol does not distort thyroid function tests.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case, this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS. *General:* Propranolol should be used with caution in patients with impaired hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta-adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be told that INDERAL may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

Clinical Laboratory Tests: Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS: Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if INDERAL is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

Pregnancy: Pregnancy Category C. INDERAL has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. INDERAL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. INDERAL is excreted in human milk. Caution should be exercised when INDERAL is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular: bradycardia; congestive heart failure; intensification of AV block, hypotension; paresthesia of hands; thrombocytopenic purpura, arterial insufficiency, usually of the Raynaud type.

Central Nervous System: lightheadedness, mental depression manifested by insomnia, lassitude, weakness, fatigue, reversible mental depression progressing to catatonia, visual disturbances; hallucinations; an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics.

Gastrointestinal: nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: bronchospasm.

Hematologic: agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-Immune: In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous: alopecia, LE-like reactions, psoriasiform rashes, dry eyes, male impotence, and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.

DOSAGE AND ADMINISTRATION. INDERAL LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily. If patients are switched from INDERAL tablets to INDERAL LA capsules, care should be taken to assure that the desired therapeutic effect is maintained. INDERAL LA should not be considered a simple mg for mg substitute for INDERAL. INDERAL LA has different kinetics and produces lower blood levels. Retitration may be necessary especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION — *Dosage must be individualized.* The usual initial dosage is 80 mg INDERAL LA once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg once daily or higher until adequate blood-pressure control is achieved. The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

ANGINA PECTORIS — *Dosage must be individualized.* Starting with 80 mg INDERAL LA once daily, dosage should be gradually increased at three to seven day intervals until optimum response is obtained. Although individual patients may respond at any dosage level, the average optimum dosage appears to be 160 mg once daily. In angina pectoris, the value and safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS).

MIGRAINE — *Dosage must be individualized.* The initial oral dose is 80 mg INDERAL LA once daily. The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimum migraine prophylaxis. If a satisfactory response is not obtained within four to six weeks after reaching the maximum dose, INDERAL LA therapy should be discontinued. It may be advisable to withdraw the drug gradually over a period of several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS — 80-160 mg INDERAL LA once daily.

PEDIATRIC DOSAGE — At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

*The appearance of these capsules is a registered trademark of Ayerst Laboratories.

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Screening: Urine Drug Tests

DAVID I. CANAVAN MD

Use of the clinical laboratory in the diagnosis and management of a whole spectrum of human disorders is well accepted in modern medicine. Tests used to detect the presence of drugs are essentially no different than other tests, but because of the implications of positive results in the social, occupational, legal, and personal arenas, there seems to be a major effort to discredit these studies.

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Laboratory results can confirm or rule out a diagnosis, may assist in determining the adequacy of the level of therapeutic agents, may establish the presence and level of mood-altering and/or intoxicating drugs, and may have an important role in establishing technical guilt or innocence in a variety of forensic issues. Let's begin with a review of the commonly used diagnostic studies, outlining the specific tests for specific drugs, the exact substance tested for, and the confirmation test of choice (Table).

Urine Drug Tests in Current Use

Enzymatic analytical procedures are used to detect alcohol levels in the urine. The urine is treated with the ADH enzyme (alcohol dehydrogenase), which will convert NAD (nicotinamide-adenine dinucleotide) to NADH (nicotinamide-adenine dinucleotide, reduced) if alcohol is present. The level of alcohol itself is measured.

Immune assay techniques involve the use of antibodies, labeled with enzymes or radioactive labels. In a positive specimen, the drug binds to the antibody and the enzymatic label or the radioactive label remains free to complete the reaction, leading to a positive result. The degree of positivity is proportional to the amount of antibody bound to the drug.

In **chromatography** there are two essential phases: stationary and mobile.

In **thin layer chromatography** the stationary phase is the TLC plate, and the mobile phase is a solvent that is absorbed by the plate and travels on the plate taking with it compounds that have an affinity for that solvent. The polarity of the stationary phase, the solvent, and the particular compound will determine the site on the stationary phase (TLC plate) where that compound will stop. The plate is then treated with a dye. The reaction to the dye at a specific location identifies the compound.

In **gas chromatography** the stationary phase is a column packed with material similar to the TLC plate. The mobile phase is a gas (helium or nitrogen). The extract to be analyzed is added to the column. The column is heated. The heat and the gas drive the compound through the column. The compound moves back and forth between the column and the gas. The polarity of the column and the compound pushed by the heat and the gas will determine where the compound will come in contact with a detector on the column (for example, flame ionization detector). The voltage change this contact causes produces a pen deflection on the recording paper. The time and peak of the deflection identify the compound; the height and width of the peak indicate the concentration of the compound.

In **mass spectrometry** the compound isolated by the Gas Chromatograph is put into the mass spectrometer. The molecules of the compound are fragmented by electron bombardment and break down into smaller chemical subgroups. The spectrometer measures the atomic mass of each particle produced. This information is fed into a computer that then identifies the compound from its composition of subgroups.

There are several important issues to consider in these studies:

- *Specificity* defines the ability of a test to discriminate among similar compounds.
- *Sensitivity* refers to the ability to detect minute amounts of the drug. Many of these tests can pick up nannograms (billionths of a gram).
- *Time to perform* varies from less than a minute to two hours for some GC/MC procedures.
- *Cost* With the exception of mass spectrometry, most tests can be done at reasonable charges. GC/MS cost varies from $75 to $300/test.
- *Reliability* Unconfirmed results can be unreliable because of the possibility of false positives. With GC/MS confirmation the reliability is close to 100 percent.

It is important to bear in mind in mass screening that patients on prescription medications for a variety of medical disorders may be identified as "drug users." There are two important considerations in these cases: (1) Urine screening alone does not differentiate between illicit or licit drug use; and (2) The individual's right to maintain privacy about personal health problems may be compromised.

Philosophical Issues

Fewer issues have generated as much controversy as the proposal for mandatory urine drug testing. Issues surrounding constitutional rights such as the invasion of privacy, freedom from unreasonable search, and "due process" are the most common. The Supreme Court has

ruled that the Constitutional Right to Privacy refers to protection against any *governmental intrusion*. The activities of a private employer do not violate this right.

Unreasonable search is protected against by the Fourth Amendment. This amendment only protects against searches *conducted by governmental authority*. The key issue, even in some governmental searches, is the question of reasonableness.

Most employers, governmental and otherwise, have long recognized the need to provide for "due process" in all of their employee relations. In the area of drug testing this is accomplished by promulgating, *in ad-*

Table 1. Urine Drug Testing

Drug	Test For	Time Detectable	Primary Test	Confirmation Test	Comments
Alcohol	ETOH	Based on metabolism 0.015 mg. %/hr.	Enzymatic analysis	Gas chromatography	Blood alcohol probably better test to determine level of intoxication at time specimen was drawn
Heroin	Metabolite	48–72 hrs.	HPTLC[1]	EMIT[2] HPLC[3]	EMIT screen will cross react with demerol/percodan, dilaudid
Morphine Codeine	Parent	48–72 hr.	HPTLC	EMIT HPLC	EMIT screen will cross react with demerol/percodan, dilaudid
Demerol	Screen: Both Confirm: Parent	24–48 hrs.	HPTLC	Gas chromatography	
Percodan	Screen: Both Confirm: Parent	24–48 hrs.	HPTLC	Gas chromatography	
Talwin	Screen: Both Confirm: Parent	24–48 hrs.	HPTLC	Gas chromatography	
Methadone	Parent 1° Metabolite	48–72 hrs.	HPTLC	Gas chromatography HPLC	If added to urine parent alone present; if ingested both parent and metabolite present
Barbiturates (short acting)	Parent	36 hrs.	TLC[4]	EMIT HPLC HPTLC TLC (Alternate)	Some diuretics may cross react with TLC
Barbiturates (long acting)	Parent	Several days Pheno −2 wks. +	TLC	EMIT HPLC HPTLC TLC (Alternate)	Some diuretics may cross react with TLC
Amphetamine	Parent	24–48 hrs.	HPTLC	EMIT Gas chromatography	Phenylpropanolamine, ephedrine can cross react with HPTLC and EMIT
Cocaine	20% Parent 80% Metabolite (Benzylecogonine)	8 hrs. 72 hrs.	HPTLC	EMIT Gas chromatography	Very high concentration of some drugs may cross react with EMIT
Benzodiazepine	Metabolite	1 dose, 48–72 hrs. prolonged, 7 days	EMIT	HPLC (Confirm-specific)	
Phencyclidine	Parent	Parent 24–48 hrs. Metab 7 days	HPTLC	EMIT Gas chromatography	
Delta-9-THC	BOTH	5–60 days	EMIT	HPTLC HPLC	

[1] HTPLC - High-performance thin layer chromatography
[2] EMIT - Enzyme multiplied immunoassay technique
[3] HPLC - High-performance liquid chromatography
[4] TLC - Thin layer chromatography

vance, a clearly defined company policy. This should include:

- A company policy statement
- Work rules linking policy and employer actions
- Enforcement procedures, that is, testing, searches, and inspections
- The employer's options in regards to sanctions
- The employee's right to challenge test results

Because the use of drugs in the workplace can lead to significant problems such as increased accidents, decreased productivity, the sale of drugs on employer premises, development of a drug subculture among the employees, loan-sharking activities, and theft, the employer has the right to protect his business interests and company property. Moreover, an effective drug program will usually lead to a safer, more comfortable workplace for all employees.

It is incumbent on any employer or agency that would institute a urine drug testing program that the laboratory used is extremely reliable, that proper confirmation of all positive results by an alternative procedure take place, and that all positive tests are interpreted by an expert in the field.

A positive test means that the reported drug was present in that specimen. It does not establish that a dependency on that drug exists. (It may have been appropriately prescribed.) It also may not, by itself, prove that the drug was the cause of impaired performance. If contamination is ruled out, it simply establishes prior intake of the drug. Obviously, if it is an illicit drug, its presence does raise serious concern. A careful clinical correlation is required to evaluate the connection between the presence of the drug and its relation to any suspected or reported impairment.

A negative test can, at times, be misleading. Disturbed performance can persist even after the drug is no longer detectible. The lack of randomicity in specimen collection may enable a chronic drug user to dilute the urine by overhydration or abstain prior to testing so that the tested urine will be negative despite ongoing chronic abuse.

Mandatory testing does offer some positive benefits:

- **Screening out of prospective employees who are drug users** A postal supervisor reported that 75 percent of applicants for postal service jobs in his area tested positive for drugs. In a major corporation, even with advance announcement of drug testing as an employment requirement, 20 percent of applicants still tested positive.
- **Improvement in the work place** In the U.S. military forces over a five-year period from 1980–1985, with the institution of a reliable urine screening program, the surveyed incidence of illegal drug use in the month prior to the survey declined from 27 percent to 9 percent.
- **Identification of users who may be referred to effective rehabilitation programs** Integrating drug control with employee assistance programs makes the process much more palatable to all. It is important to remember that drug abuse is not confined to just workers, but involves all levels of management. If a policy of mandatory testing is to be instituted, it must not be discriminatory.

Purpose of Drug Testing

Obviously, the primary reason for drug testing is to **identify the user** of drugs who may fit into any one of several categories. These include, but are not limited to prospective employees; employees in critical roles (random and for-cause testing): hazardous jobs, critical jobs, or sensitive jobs; occupations where impaired performance is a serious risk to others: airline pilots, railway motormen, bus drivers, truck drivers, or physicians; intoxicated drivers accused of DWI in highway accidents, and in highway fatalities. (**N.B. Alcohol and drugs should be routinely tested for in all these cases.**)

Other categories are forensic issues in homicide, in suicide, and in unexplained deaths; and athletic competitors (amateur and professional) to establish "fair-play" standards, to identify those with treatment needs, and to reestablish the integrity of the sport.

Urine drug testing is an important therapeutic tool in **monitoring the recovery** of the substance abuser, following appropriate initial therapy. It provides two major benefits: constant reminder that someone else is documenting the "drug-free" state; and an "early warning system." In the event of a "slip," prompt and decisive action can be instituted to nip it in the bud.

It is often very important in attempting to exonerate a falsely accused individual or in attempts to return rehabilitated users to their rightful place in society to be able to **prove a significant period of "drug-free" time** as an indication that the individual either does not have a drug abuse problem or else is successfully dealing with the prior problem. This documentation can be very helpful in dealing with employers, licensing boards, sports authorities, law enforcement agencies, probation departments, etc.

An additional indication for testing is the case of a recovering individual who finds himself or herself in a position where there may be future litigation in which

the *history of drug abuse* could have a prejudicial effect. By getting a documented "drug-free" urine at the time of the incident, a future defense against allegations of drug abuse as a factor is established.

Procedure for Conducting Tests

Urine is the ideal body fluid to test for most of the substances about which we are concerned. The short life of most of these substances in the circulating blood is one issue. The relative ease of collection of urine is another. Finally, the persistence of the drug or its metabolites in the urine is a major reason to choose urine.

When to test? In general, random, unannounced, testing is far more reliable than scheduled-in-advance testing. The individual tested does not have the opportunity to abstain just for the test or to attempt to beat the sensitivity of the test by overhydration to dilute the urine specimen.

In monitoring the "drug-free" state, a fixed schedule that considers the persistence of the drug and/or its metabolites in the urine can be employed (for example, bi-weekly urines or every two days.) As in all other clinical laboratory procedures, cost and reliability factors must be considered.

How to test? The authenticity of the specimen is critical. Unless it can be clearly established that this urine came from this person at this time, the results may be meaningless.

The first requirement is that the urine be collected in the presence of another person (ideally of the same sex) who can attest to its authenticity. The second requirement is that the collector control the specimen from the time of collection until it is forwarded to the appropriate laboratory. With good control at the lab receiving end, this can be until deposited in the mail or whatever transport mechanism is used.

Several incidental issues are worthy of note: a clean container with tight closure suitable for transport is required, and careful attention to accurate labeling of the specimen is essential. A simple requisition form is necessary to make it easy to request specific tests and, if it is also the reporting document, to make it difficult to produce errors.

What to test for? Because there are significant variations in the cost of testing for certain compounds, intelligent decisions should be made in advance in selecting the specific compounds to be included in the test. The important thing is to know your client and your laboratory and select appropriately from the laboratory menu.

Pitfalls in urine drug testing No matter how sophisticated your reference laboratory may be, there are several ways your best efforts can be thwarted.

- Failure to realize the metabolism of a specific drug can lead to testing that is unlikely to detect the drug
- Testing on a fixed schedule less often than twice a week is setting yourself up for deception.
- Failure to monitor the collection of the specimen
- Breaks in the chain of evidence that allow deception or mixing of specimens
- Failure to test for the right drugs
- Deception by the client is always a consideration, for example, diluted urine (check specific gravity), switched urine (check temperature of specimen), deception devices ("eyeball to urethra")

There are some issues here that can relate to the laboratory used. Consider these points in selecting your lab: an inexperienced staff and/or an unsophisticated laboratory; failure to rule out false positives with *alternate* confirmation techniques; clerical errors in tracking specimens and/or reporting results (if the report doesn't fit the client, call the lab to be certain of the result!); delayed reporting of positive results; lost specimens and/or reports; and an inadequate quality assurance program at the lab. Until you have been "burned" by some of these problems, you may not appreciate their relative importance.

Precautions for a Successful Program

Testing urine is becoming very important in the fight against substance abuse. To assure its continued value and success, those of us who will be using this tool must use it wisely. These are the ingredients essential to a successful program:

- Random specimens are always best
- Notification should be as short as possible (ideally never more than 12 to 24 hours)
- Check the specific gravity. If the urine is very dilute, reschedule, if need be, to get a concentrated specimen
- Always collect specimens under direct observation
- Be aware of deception techniques!
- Provide clear, sturdy receptacles
- Carefully control the chain of evidence
- Choose a reliable and experienced laboratory with "state of the art" methodology
- Make sure all positive results are confirmed by an alternative *more sensitive* technique
- Arrange for immediate reporting of all confirmed positive results

- Make sure that all positive results are interpreted by someone with expertise in the field
- Be prepared to take prompt and appropriate action on positive results
- Remember to pay careful attention to the person's rights, especially the right of confidentiality.

Conclusion

Properly used urine drug testing is an effective tool in the detection of drug abuse, in helping to provide a safe and effective workplace, in deterring drug use, in identifying individuals for therapeutic intervention, in monitoring recovery, and in documenting the drug-free state.

It is an effective part of a comprehensive attack on the drug abuse problem in our society. It is *not a substitute* for a comprehensive program.

Acknowledgment

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ad·dict \ ə-'dikt \ *vb* **1 :** to devote or surrender (oneself) to something habitually or excessively **2 :** to cause (a person) to become physiologically dependent upon a drug

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Impairment Prevention at the Hospital Level

JOHN-HENRY PFIFFERLING PhD

Hospital-based wellness committees are an innovative way for hospitals or groups of hospitals to approach prevention of professional distress and impairment. The committees work with state professional advocacy groups to identify, refer, and support distressed professionals. Our consulting experience in establishing such cross-territorial groups prompts a positive prognosis. The public's safety, the profession's integrity, and the professional's health are all promoted by a wellness committee for professionals.

Pfifferling is Director, Center for Professional Well-Being; and Clinical Associate Professor, University of North Carolina at Chapel Hill, North Carolina.

Hospitals can no longer deny the possibility of conditions that may precipitate reduced effectiveness among medical and professional staff. The hospital-based wellness committee oriented toward caring for the health professional's needs is one mode of health-care promotion.

Hospital-based wellness committees are designed to foster colleagiality; to promote early recognition of distressed professionals; to serve as a monitoring, by-laws sanctioned, peer review group; and to promote health professionals' effectiveness.[1,2] As "stressed" professionals are identified as high risks for malpractice, personal distress, reduced communication skills and behavioral disturbances affecting the health care team, impetus develops for a hospital-based wellness committee.[3]

I advocate development of hospital and cross-hospital (or cross-practice), institutionally based foci for the prevention, evaluation, education, resource referral, and surveillance of health professionals. These programs act in liaison with established advocacy task forces that now function as health professional ("impaired physician") committees, offering an alternative to legalistic and disciplinary approaches to the troubled professional. They also can widen the purview of advocacy programs to allow earlier assistance and support for handicapped, transiently "disabled," crisis-laden, and other similarly distressed professionals. To function optimally, the well-being committee must combine the values of medicine (including nursing, pharmacy, and allied professions) and be free of obligation to report its activities to regulatory agencies.

Definition and Protection

Not to be confused with a committee or group that provides health promotion education to patients, the hospital-based wellness committee is designed to "study ways (and offer mechanisms) in which we can better understand and deal with problems that gravely affect our professional and personal lives."[1]

The establishing of Waits's Committee at Northside Hospital in Atlanta was based on dissatisfaction with prevailing mechanisms to handle physician/staff personal problems.

Initiation of a committee could come from any area, but precautions must be taken to protect the confidentiality of the committee. Most states consider the committee protected if its by-laws or its composition and purposes are approved by the governing board of the hospital. I recommend that the committee include in its purposes indication of concern for the quality, effectiveness, competence, and performance of health care provided by its health professionals.

Purposes of the Committee

Designed to assist in the prevention and early identification of problems that may precipitate impairment among providers, the committee can be the repository for health promotion and self-care that allows providers to maintain good health and energy for patient care. The committee is double-pronged: to deal with distress issues and to facilitate help for troubled professionals and advocacy for good health.

The committee may operate in these advocacy areas:

1. Information resources It may collect information regarding prevention, counseling, career development, remediation, rehabilitation, treatment, and aftercare services.

2. Advocacy At the institutional level, its members will advocate quality-of-life appraisals and interventions congruent with state-of-the-art information.

3. Screening The committee may act as a first screen in identifying potential human factor, high-risk areas. Its recommendations can be instrumental in establishing interventions to reduce risk factors at both individual and institutional levels. Liaison can be established between other loss-prevention and quality-of-care activities.

4. Contact and primary referral The committee will be the first line of contact when accusations are made or concerns identified about high-risk individuals or groups. When media approach the institution, the committee will be the first educational contact.

5. Surveillance It may act as a first surveillance when individuals are under treatment or it may delegate such functions. Legal counsel shall be sought for liability issues in delegation situations.

6. Facilitation of treatment and rehabilitation or remediation It will provide advice, specific assistance, and suggestions on corrective rehabilitation or

counseling to the target person or group. In cases of educational remediation it shall monitor or delegate surveillance and approval of an educational remediation plan. Its criteria may be used in selecting treatment centers or modalities. It should monitor the treatment outcome data from competing treatment resources and maintain a liaison with appropriate remediation, treatment and aftercare service groups or individuals.

Relationship to State/County Groups

The wellness committee also can serve as a liaison to state or county advocacy groups seeking to delegate aftercare monitoring of a "treated" professional. The committee can maintain a high-risk monitoring system on the health of its staff to ensure early identification.

Committee members may be trained in **intervention/confrontation** and, in turn, train local staff not to avoid contact with a troubled professional because of ignorance and fear associated with stigmatizing illnesses or conditions.

Committee members may become **patient care advocates** for members of the professional's family or the professional when he or she is disabled and in treatment.

Committee members develop local expertise in the epidemiology of health and disability among health professionals and can use their expertise in research, education, and in serving as **media** or **educational resources** on professional health.

Committee Composition

Each hospital must decide on the population to be served. Northside Hospital's committee, for example, is a "mixed" committee with nursing, medical, and administrative members while others have started with only single-profession membership.

Cross-hospital committees Small hospitals can form regional or cross-hospital membership as have peer review and quality review committees using JCAH criteria. In small medical staff settings it is essential to organize cross-hospital or regional committees so that local enmities and emotional attachments will not interfere with the purposes of the committee.

Northside Hospital has an emergency hotline with a confidential counseling service offered for hospital staff members. This service is offered at no charge to members with hospital appointments or privileges.

It is advisable to appoint members to the committee from several specialities so that merit, advocacy, and expertise are the recruitment criteria. The results of the committee's deliberations about speciality specific stress can serve as topics for local continuing education that is specific but anonymous. Committee members can make special efforts to elicit their speciality's support in the area of prevention.

Provision should be made for overlapping continuity of membership to ensure leadership and viability of the committee. Where residents (and other health trainees) are present it is advisable to have at least one student/resident representative. The committee's charter should indicate concern for the health and distress of trainees and decide on procedures to help them.

Innovative committees are starting to look at spouse or significant-other stressors and to include spouse representatives. Specific instructions to the committee need to be formulated to deal with family issues. The prevailing literature on spousal distress and its impact on the professional is still rudimentary, although family therapy professionals are unequivocal on the destructive nature of family dysfunction. Family health can be a primary preventive.

The committee should not be so large that its work becomes formal and overly deliberative. The committee is an advocacy group concerned with assisting those in distress and with finding local resources to help where professional assistance is required. The committee is not a therapy group.

Overlapping Membership

It is advisable to form the committee of members who do not simultaneously serve on a peer review or a disciplinary committee. In small hospitals this may appear impossible, but it is for just such a reason that regional or cross-practice/hospital groups are essential. Anecdotal experience serves to reinforce the logic that "healed or recovering" professionals or spouses are extremely useful to committees' functioning. Certainly expertise in health education, chemical dependency, preventive cardiology, and health psychology is ideal for committee membership.

The committee's bylaws must define its supradepartmental authority emphasizing concern for nondisciplinary functions and reinforcing support, referral, creation of help-seeking networks, and advisement to the individual or department being counseled.

A regional committee should be formed for diversion functions and monitoring. Although based on therapeutic principles, diversion requests are directly disciplinary in nature and often have potential for conflict of interest with the purely advocacy concerns of the committee. Local guidelines must be developed for diversion activities when such recommendations come from state Boards of Licensure.

The committee is an ideal channel for publicity on local and regional self-care groups such as Divorce Recovery, Malpractice Coping, Al-Anon, AA, EA, OA, NA, and handicapped support groups. Speakers from

groups such as the American Society of Handicapped Physicians, International Doctors in Alcoholics Anonymous, and Pharmacists Concerned for Pharmacists, or Dentists Concerned for Dentists can be used in the educational sessions of the groups. The committee may wish to contract with local librarians to develop resource and speakers lists on self-care groups.

Policy Areas

The committee should be concerned primarily with the needs of the professionals it serves. Its role should be supportive, advisory, educational, referral, and preventive. As advocates, committee members may have to serve as expert witnesses in regulatory, legal, or arbitration situations. Appropriate coaching for these functions should be available for members.

The committee may use appropriate epidemiologic techniques such as the St. Paul Human Factors Stress Instrument to identify high-risk departments and individuals. Recommendations may then be made to the departments for educational presentations on help resources. Referrals can come from any source; the committee then validates the nature of the complaint or request for help.

The committee may be a delegated "treatment" effort after the distressed professional has been assessed by an "impairment" committee and found in need of local aftercare. Its therapeutic functions should be limited to support, referral, and assistance but when professional therapy is needed, the case should be delegated to an outside professional or group.

As an advocacy group it is advisable to maintain general records but not professional-specific notes unless delegated by either the state committee or the individual physician.

An Appropriate Niche

Well-being committees or professional assistance programs may flounder when they lack a clear charter. Committees may function in the shadows while distressed professionals continue to pursue harmful behaviors until flagrant violation of professional standards is observed. This is intensely destructive in small hospitals or group-practice settings when interwoven networks maintain inadvertent denial of toxicity. The committee must function as part of a comprehensive risk management, stress awareness, and peer review program.

In turn, local risk-management efforts relate to statewide "impaired" professional's program jointly attempting to reduce risk to the profession, the practice, and the hospital from distressed professionals. Local chiefs of service must insist that performance standards be met and attempt redemptive or rehabilitative intervention when detrimental behavior is documented. When local efforts fail, help must be sought through a state program such as the Peer Assistance Program of the North Carolina Nurses Association.

The professional well-being committee can fit into an overall hospital risk-management program by providing these services:

1. Consultation to local risk managers or peer review groups including utilization review
2. Contact with distressed professionals to facilitate treatment, access to referral resources, and self-care advice
3. Surveillance and reeducation or reentry counseling of professionals
4. Consultation to the distressed professional or group (including the work supervisor) concerning readiness to return to full or partial responsibility of duties
5. Diversion surveillance. Professionals helped by the committee could be assigned a medical leave or voluntary withdrawal of privileges (status) while engaging in a remediation program.

Educational diversion is a new concept based on the institution's need for a competent staff and its liability if its staff fails to maintain its educational competence and/or is implicated in a preventable malpractice action.

Each hospital or practice establishing a well-being committee offers its risk managers a compassionate alternative to privilege loss. It conveys to its professional staff a balanced value system that acknowledges its professionals as persons subject to behaviors, accidents, and diseases that reduce professional effectiveness.

The personal and social cost to providers of modern health care is a drain on professional energy. When the drain causes providers to burn out or to disengage from optimal monitoring of continuing competence, the entire medical family is at risk. The professional well-being committee admits these risks, and proactively takes a stance to prevent, reduce, and neutralize the distress borne by its providers.

Obstacles to Success

Well-being committees are preventive and colleagial advocacy groups based on health promotion rather than cure. A major obstacle is the ideology of medical care oriented toward control of a patient's disease and failure to admit the risk of provider distress and disease or disability. Committee members need to understand and be committed to health promotion for both providers and patients.

Well-being committees can be undermined by single-interest groups who attempt to persuade administration that one discipline or therapeutic orientation is best for

dealing with professionals' problems. Neither the ideology of a self-help group devoted to individual diseases nor behavioral disciplines like psychiatry can alone deal effectively with the array of problems presented by professionals in distress. Professionals may become disabled by disease, accidents, educational deficiencies, stress disorders, family dysfunction, characterologic developments, life-work dissatisfaction, and contagious morbidity.

The committee may get bogged down in triage and by delegating noncrisis problems (such as those best prevented by early identification) to a lower priority. A system must be developed for crisis referrals so that the energy of the committee is not dissipated by predictable crises.

Small communities may encounter resistance by professionals to using mental health counselors from the local community. A contract with a nonlocal employee assistance program (EAP) or with a "hotline" to a professional counseling service solves this problem. Other helping professionals may be willing to contract for such services on a retainer basis.

An adequate self-care skills library with materials on stress management, grief, loss, parenting, divorce, adult children of alcoholics, financial planning, time management, and self-esteem are often enormously useful.

A program can be overwhelmed if it lacks adequate resources or staff to manage the requests. The pool of recovering, career-changing, and caring professionals to coordinate these services is widespread, but they need to know a hospital administration is willing to support their efforts.

Funding

Innovative funding is associated with well-being committees. Tacking on a fee for hospital privileges is one way of funding the committee. Local organizations have raised money by charity auctions and donations; others have hired fund-raising counsels.

Health maintenance organizations have built the committee and its services into its permanent budget. Fund-raising counsels have used development budgets to fund the committee. A portion of local Continuing Education programs fees have been used for the committee.

Outside philanthropies concerned with health education and health promotion are useful sources of funding on a grants basis with a matching percentage from the hospital. A speaker's bureau in one hospital donated half its fees to the committee.

Another innovative mechanism may use the state hospital association liaison with state professional societies to develop a regional consulting group that is available (on a fee basis) to visit interested hospitals. This umbrella group works as a start-up team with the fees going back to the professional society's advocacy committee as continuing funding.

I hope the future will see the professional associations' advocacy committees (like the pharmacy or the medical association) joining to develop professional EAP services. At least two medical societies are considering the development of such services as Professional Assistance Programs. This will bring needed funds and allow local organizations to care directly for needs of members.

Summary

A hospital or cross-hospital sponsored well-being committee for the health promotion needs of its professional staff is an innovative approach to reducing professional distress and impairment. Its primary function, advocacy for the distressed or needy professional, is a complement to recent professional commitment to health-promotion issues. The well-being skills of professionals can be enhanced by local resource services as well as personal need when disabilities, diseases, handicaps, or distress are identified in the professional staff.

Acknowledgment

Much of my impetus in this area of prevention comes from association with Tom Bittker MD, former Chairperson of the Arizona Medical Association's Impaired Physician's Committee.

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Hotline Numbers for Impaired Professionals

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Licensing Boards and Impaired Professionals

DONNA M. DORSEY RN and ROSLYN SCHEER MAS

As a result of increasing experience with substance abuse and in response to changing attitudes and theories, licensing boards have begun to modify their methods of disciplining the impaired professional. Today, boards try to balance public protection with individual rehabilitation. The Maryland Board of Examiners of Nurses and the Maryland Board of Pharmacy have created procedures they believe are effective in maintaining this balance.

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The responsibility of health occupation licensing boards is to protect the public from unsafe practitioners. The increase of substance abuse in our society is reflected in the health professions causing licensing boards to place greater emphasis on their role with the impaired professional. Substance abuse is one activity that places everyone at risk. The individual who is actively using drugs and/or alcohol is not safe and should not be permitted to practice. A practitioner who is a danger to patients must be removed from the practice setting until it is determined that individual can practice safely.

During the past five years licensing boards have found it necessary to reexamine their role in disciplining the impaired professional. Traditionally, the license of the impaired professional was revoked because most licensing boards believed that the individual would never recover sufficiently to permit safe practice. Experience has demonstrated that this position is not valid. The person committed to an appropriate treatment program can practice safely in a controlled setting. Confronted with this knowledge and an increased number of individuals being reported for substance abuse, boards are struggling with the dilemma of protecting the public, while supporting the rehabilitation efforts of the impaired professional.

The disciplinary process is initiated when a complaint is received by the Board concerning an impaired professional. The statutes of the Pharmacy and Nursing Boards provide civil immunity to an individual who makes a complaint, in good faith, to the Board concerning a licensee.

Currently the Board of Nursing receives the majority of these complaints from employers. Typically, the nurse is discovered falsifying records to obtain drugs for personal use. In a small number of cases, the nurse is observed consuming drugs while on duty or arrives at work under the influence of drugs and/or alcohol. Occasionally, complaints are received from peers or patients who believe the nurse is impaired. In addition, other boards of nursing disseminate reports that initiate disciplinary action by the Maryland Board.

Complaints against impaired pharmacists are generated primarily by conflict with the criminal justice system, inspection by the Division of Drug Control, or by the action of a licensing board in another state. Complaints rarely are received from patients, employers, or peers. A friend or employer is more likely to contact the Rehabilitation Committee of the Maryland Pharmaceutical Association for help than to report someone to the Board. Like the Board of Nursing, the Pharmacy Board's action often is supported by information obtained from records created and maintained by the licensee.

Investigation

Investigation of the allegation is the next step in the process. Once the investigation is completed and the Board has determined there is sufficient evidence to charge the licensee with a violation of the law, a charge letter is issued. In accordance with state law, the Board may deny a license to an applicant, reprimand a licensee, place a licensee on probation, or suspend or revoke a license. In addition, the Board of Pharmacy may impose a civil penalty not exceeding $5,000. The sanction a board chooses is based on the individual situation. The charge letter offers the licensee an opportunity to negotiate a settlement in the case at a prehearing conference prior to the full evidentiary hearing. Settlement precludes the need for a formal hearing. Lack of agreement in the prehearing conference will not prejudice the case should the Board hold a formal hearing.

In preparing for disciplinary action, the Board of Pharmacy has available for support the Pharmacist Rehabilitation Committee of the Maryland Pharmaceutical Association. The members of the Committee are the experts the Board turns to for advice. For example, at the time of a prehearing conference the Board may not have sufficient information to determine whether it is safe for the pharmacist to practice. The Board can refer the pharmacist to the Rehabilitation Committee, which arranges for a thorough evaluation and a report with recommendations indicating whether it is appropriate for that individual to practice. If the evaluating therapist recommends that the pharmacist be allowed to practice, any special conditions of practice, as well as treatment and monitoring suggestions, are included. With this information, the Board is prepared to make a determination.

Unlike the Board of Pharmacy, the Maryland Board of Nursing currently has no link with an impaired

nurses committee. The Maryland Nurses Association is in the process of establishing such a committee to provide support to the impaired nurse. In the interim, the Board refers nurses directly for evaluation when information is needed regarding the nurse's plan of treatment and ability to practice.

Once all the necessary information has been obtained, a consent order can be negotiated with the licensee. The order specifies each condition the individual must follow. These conditions are designed to safeguard the public while permitting the professional to practice. Both parties must agree to all aspects of the order, including the findings of fact and the conclusions of law. Usually the order will suspend or revoke the license, stay that action, then place the individual on probation. Some consent orders revoke or suspend the license without a stay until the Board determines the licensee can safely return to practice.

Probation Conditions

Although each order is tailored to the licensee's particular situation, there are a number of common conditions of probation used by both Boards. For example, the licensee must enroll in an approved drug and/or alcohol treatment program. Quarterly reports from the program, indicating that the licensee is complying with all aspects of the treatment plan, are required. Should the licensee be discharged, the program must submit a discharge summary. If at any time the licensee fails to comply with the treatment plan, the program is required to report this to the Board. Observed random urine screens are required with any positive urines reported to the Board. All orders require the licensee to write quarterly reports describing progress being made in coping with the problems of impairment and the licensee's evaluation of his or her own practice. A review of these reports usually provides a strong indication of the individual's progress toward recovery.

The consent order specifies that the pharmacist sign a contract with the Rehabilitation Committee setting forth the performance standards during the probationary period. The Rehabilitation Committee provides quarterly reports that advise the Board of the pharmacist's progress in therapy and in dealing with chemical dependence. If the pharmacist terminates the contract with the Rehabilitation Committee without being discharged, the Board is immediately notified. If it is reported to the Board that the licensee is incapable of practicing pharmacy, the individual will voluntarily discontinue practice until it is determined that the licensee is capable of resuming practice.

All conditions of probation may be amended as circumstances change. The licensee may request, in writing, an amendment and provide rationale for the request. The Board also can initiate an amendment. Because this is a consent order, the Board and licensee must agree on any changes.

As long as the licensee continues to comply with all terms of probation the stay remains in place. Should the licensee violate any condition, after a hearing, the Board may remove the stay and revoke the license to practice. Pharmacy consent orders authorize the Board to suspend or revoke a license without a hearing if the Board receives an unsatisfactory report it believes in good faith to be accurate or if the pharmacist has violated certain sections of the law. However, the pharmacist has a right to a hearing within thirty days of a written request to the Board.

Both Pharmacy and Nursing consent agreements provide for the licensee to petition for termination of probation and full reinstatement without any conditions or restrictions two to five years after the date of the order. When the petition is submitted, the licensee may meet with the Board, submit additional information for consideration, and bring witnesses to testify. Then the Board will compare what actually occurred during the probationary period with each requirement in the order. In most cases the license will be fully reinstated. However, if the Board determines that termination of probation and complete reinstatement is not appropriate, the Board may modify one or more of the conditions of probation. If the licensee does not submit a petition, the probationary status (subject to the conditions enumerated in the order) will continue indefinitely.

Both Boards believe that probation is an effective mechanism for dealing with the impaired professional. The terms of probation permit the Board to carefully monitor the practice of the licensee. Each condition of probation is included because it is an integral part of the mechanism that protects the public and supports the licensee.

Not all nurses and pharmacists who are impaired are reported to their respective Boards. Nurses have the option of enrolling in a drug and/or alcohol treatment program. Should the nurse fail to meet all the conditions of the treatment program, a report to the Board is required. At that point, the nurse is subject to disciplinary action.

Any pharmacist with a substance abuse problem can avoid involvement with the Board and obtain help without jeopardizing the health and welfare of patients. The Board of Pharmacy strongly recommends that the substance abuser sign a contract with the Rehabilitation Committee immediately. The contract specifies the terms under which the Rehabilitation Committee agrees to assume the advocacy role on behalf of the pharmacist. A pharmacist who has a contract with the

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Rehabilitation Committee can practice only if the Committee has given approval in writing. Failure to comply with the terms of the contract is ground for release and the matter is referred to the Board of Pharmacy for possible disciplinary action. If the pharmacist complies with the agreement and does not get into legal difficulties, the Board will never be aware of the problem. The advantage to the individual is that the substance abuse never becomes a legal problem and is treated only as a medical problem. The Board views the Rehabilitation Committee as a viable alternative to disciplinary action.

The Boards of Nursing and Pharmacy believe the current disciplinary process is effective in protecting the public. The close monitoring required in the consent order facilitates the Boards' ability to carry out their responsibilities while allowing the licensee to practice under controlled conditions. It is the Boards' view that a nonpunitive approach to the substance abuse problem best serves the public interest.

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The Role of AA in Treatment and Recovery of Impaired Professionals

JOHN STEINBERG MD

Alcoholics Anonymous has a central role in the recovery of alcoholics, and professionals are no exception to this rule. The Twelve Steps of AA are an outline to the recovery process for individuals. The Traditions are, in effect, the operative principles by which the overall AA organization functions.

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AA in its present form represents the culmination of the initial efforts of two alcoholics to ensure their continuing recovery through working with others. Bill Wilson, one of the cofounders of AA had numerous treatment failures and successive alcoholic relapses despite many attempts at recovery. Although Wilson had been approached early in 1934 by an old acquaintance, Ebby T., who had gained sobriety through the principles of the Oxford Group, he did not achieve sobriety through Ebby's initial intervention. In December 1934, while at the Towns Hospital, under the care of Dr. William Silkworth, Wilson had a very dramatic, ecstatic spiritual experience. After this experience, with his physician's reassurance that he was still sane, Wilson emerged an enlightened man. He never drank again.

Later Wilson was to realize, that alone, he could not remain sober for long. He had experienced a beneficial effect on his own sobriety through working with other alcoholics. Thus, while on a business trip to Akron, Ohio, in 1935, when he felt the urge to drink, he reached out to find another alcoholic to help.

Through a serendipitous turn of events, Wilson was placed in touch with Dr. Robert Smith, AA's cofounder. While they initially met on Mother's Day 1935, Dr. Bob, as he is referred to in AA literature, had yet another drinking episode. Thus, AA's official starting date became June 10, 1935.

AA's beginning as an organization was not without difficulties. Early efforts at promotion were not very successful. At the end of the first two years, there were extreme financial difficulties. The AA *Big Book*, a basic text of the AA program, was finally published in March 1939. It did not fulfill its initial expectations of raising funds for the fellowship: less than 50 books of 5,000 printed were sold in the first few months.

There were, however, powerful friends of AA who helped support the new organization. John D. Rockefeller Jr. and his son, Nelson, were among them. John Alexander, an investigative reporter, became a friend of AA and helped immensely with an article in the *Saturday Evening Post*. By November 1941 there were over 200 AA groups and 6,000 members. AA was now growing, and groups were being founded in many areas without the direct intervention of Wilson or Dr. Bob. AA was truly evolving as a program of "attraction, rather than promotion."

By 1944, the AMA officially recognized alcoholism as a disease and acknowledged the valuable role played by AA in its treatment.

In 1951, AA records showed 111,765 members and 4,052 groups. AA had been established in 48 states and 10 Canadian Provinces. The first AA General Service Conference was held. AA's recognition grew rapidly. The Lasker Award was offered to Bill Wilson in 1951, but at his suggestion, the award was given to AA as a whole. In early 1954, Yale University offered Bill Wilson an honorary Doctor of Law Degree, which he declined, conforming to the AA Tradition of anonymity.

By 1955, Bill Wilson and Dr. Bob Smith felt that AA had come of age. AA would be run by its Trustees, who would "serve, not govern." At the General Service Conference, in St. Louis on July 1–3, 1955, AA was released to the care of its members. AA members now numbered 131,619 and there were 5,927 listed groups. At present, AA counts over one million members and exists in 114 countries.

What exactly is AA? The fundamental unit of AA is "The Group." AA groups hold meetings to share their strengths, hope, and experiences that they may recover from alcoholism. The essence of the AA experience can be summarized in two words, sharing and caring.

AA and Narcotics Anonymous (NA) meetings are usually an hour long. Some are devoted to the discussion of the Twelve Steps. Other meetings are closed and attendance is limited to recovering alcoholics. Each AA member is urged to find a sponsor, a person who will work with them one-on-one to help in their recovery.

The Twelve Steps

The 12 Steps of AA represent the actual program recovering alcoholics go through to achieve sobriety. In the first three steps, the alcoholic "surrenders" to the fact that he alone is powerless over his illness but that recovery is possible through the AA program. In steps four through twelve, as in all psychotherapies, there exists the concept of becoming honest with oneself and the unburdening of guilts and hostilities. Both helping and being helped are stressed. These steps represent a road map for recovering alcoholics. They are not a program to stop drinking; rather they are a program for how an alcoholic may live a sober, productive, and enjoyable life.

The Twelve Traditions

What the steps are to the individual, the 12 Traditions are to AA as a whole. While these are easily understood and have become the framework around which AA has grown, two concepts are worth special emphasis. One is the idea of self-support as listed in the Seventh Tradition. When AA accepted the Lasker Award, they refused the $1,000 grant that would have accompanied it. Individual members are limited to a maximum $500 contribution annually. Bequests from a members' estate are also limited to a $500 maximum. A member's voluntary contribution at a meeting customarily ranges from $.25 to $1.00, and is not mandatory. Maintaining this traditional strict financial independence, AA has ensured its autonomy and its integrity as a spiritual program of recovery.

The other concept I would like to emphasize is the Third Tradition, the membership requirement. It is noteworthy that AA recognizes that alcoholics may simultaneously desire not to drink and to drink. The same holds true for addicts who may want to get high, while wishing they could stop using drugs. Therefore, AA and NA emphasize the positive and ignore the negative. Qualifying terms like a "sincere" desire or "an exclusive" desire are avoided.

The addict or alcoholic need not actually cease use of drugs or alcohol prior to coming to NA or AA. The desire to stop does not even have to outweigh the desire to drink. All that is required is at some level the desire to recover.

With that any alcoholic or addict can become a member of AA or NA and begin their recovery process.

Case Histories

Some of the most powerful evidence of the efficacy of AA and NA in the treatment and recovery of alcoholic/addicted professionals comes from case histories of those who use AA/NA and benefit from the programs.

Case 1 My name is M.L., and I'm a grateful recovering drug addict and alcoholic. I say these words daily, the frequency with which I attend an AA or NA meeting. I'm a 32-year-old practicing physician in the field of Internal Medicine. From the very first exposure to AA, I enjoyed the meetings, despite the fact that I was under coercion to attend. I suppose that just as my addiction to drugs and alcohol persisted out of attempts to feel better, my attendance at AA and NA has persisted because these meetings do indeed make one feel better. Unlike drugs and alcohol, the good feelings produced by AA and NA are genuine. They come from within.

It has been some time since my last use of drugs and alcohol, yet my attending AA/NA meetings is at a greater frequency than it was early on in my addiction.

The fellowship has so much more to offer me than merely stopping my active addiction. AA/NA meetings help me achieve new levels of personal, emotional, and spiritual growth. Early in my addiction I did not want to recover, I simply wanted to get the Medical Society off my back. With further attendance, I came to be envious of the quality of life I saw exhibited by those members in recovery. Eventually I wanted what they had. At that point "I surrendered." I knew my life had become unmanageable through my use of drugs and alcohol. I came to believe I could recover, as I now knew others who had recovered and were willing to help me. Through the working of the 12 Steps Program of AA/NA I have been given the greatest gift of all—the freedom to be myself and to like and respect myself.

Some colleagues have commented that I simply replaced my addiction to alcohol and drugs with an addiction to AA/NA. My view is somewhat different; I like to discuss addictions versus what I refer to as dependencies. Addictions are negative: they cause pain, distract from a full life, and diminish us human beings. Dependencies are positive, they bring joy, expand our horizons, and enlarge our human dimensions; they improve our quality of life. As an example: A diabetic is dependent on insulin for a good quality of life; he is not an "insulin addict." A patient with COPD may be dependent on supplemental oxygen for a reasonable quality of life; he is not an "oxygen addict."

In my case, alcohol and drugs were my addictions. They subtracted from my life. AA/NA have become my dependencies. They enhance the quality of my life, and quality of life is exactly the reason I continue to attend AA/NA. I'm grateful for their existence.

Case 2 This history is that of a 30-year-old medical student. Her school has granted her a one-year leave of absence so she may complete her recommended treatment. She will resume her medical studies this fall.

I'm a grateful recovering addict, and to me NA and AA meetings and the fellowships are my lifeline. In the past, I relied on drugs to help me socialize and feel complete around people. However, my addiction eventually led me into total isolation. I did not want anyone to know I had become an IV drug abuser. I knew I needed help, but I didn't know whom to trust with what I thought was a unique problem.

When my own attempts to stop using failed time and

time again, I sought help from psychiatrists. Psychoanalysis alone did not work, so I tried going to church. That did not work either. Finally, I found a psychiatrist who told me I was an addict, that I needed inpatient treatment and the help of the fellowship in NA/AA.

I did not like what I heard because I did not want to admit I was powerless over drugs and alcohol, so I refused treatment. My addiction had progressed to the point where I was locking myself in my house for days, injecting drugs, frequently overdosing, and coming to in convulsions. Realizing how hopeless and sick I was, I agreed to do whatever I had to do. I went through inpatient treatment and began attending NA/AA.

When I first started going to the meetings I thought that all I had to do was show up and listen. What I heard there really impressed me. I discovered I was not the only person with this problem. In fact, I heard stories that made my problem look small in comparison with others. Eventually I felt comfortable enough to talk about my own disease. I knew these people would understand and not judge or hate me for having what I learned was a disease, not lack of morality or willpower. In fact, people even came and hugged me after the meeting and told me that they cared! I was given phone numbers of people whom I could call if I was having a compulsion to use or if I just needed to talk to someone. I finally began to make real friends in AA/NA; I don't have to put up walls or defenses. I can talk about my addictions and learn how others are coping with this same problem and winning. I learned the 12 Steps to recovery really work. I meet people who are having successful and happy lives in recovery as well as those who have relapsed and are suffering as a result. There are also those who disappear from the rooms of NA or AA only to die of this disease. I can learn from all these people.

As a recovering addict I still am undergoing psychoanalysis and attending church, but the NA/AA meetings, the fellowship, and the 12 Steps are my lifelines keeping me in a day-to-day reality.

Case 3 The following case history was prepared by a pharmacy student whose addiction reached a crisis in his third year of Pharmacy School. He is now a 22-year-old working student.

My name is R.P., and I'm a recovering drug addict and alcoholic. After leaving Pharmacy School I went into a drug and alcohol rehabilitation center. No real AA/NA was emphasized in this program, and as a consequence after leaving I relapsed. My life got worse, and I began to get sicker. I wrecked my car, dumped my motorcycle, fought with my parents, and was in a constant blackout.

After hitting bottom for the second time, I decided I wanted to get sober and stay sober. I went to a 42-day Program, which was AA oriented; then to a 90-day program followed by 6 months in a halfway house.

This second rehabilitation hospital was my first real experience with AA fellowship. I felt a sense of caring and hope from the people attending these AA meetings. I continued to attend AA and NA. The program I was in required me to do so. During this time I got close to the people in AA for the first time in my life, and I made friends who cared about me.

After leaving the treatment center I continued to go to NA and AA meetings to develop a solid foundation for my recovery. As an additional benefit of the AA/NA programs I was able to meet new friends and to have a new social life where alcohol and drugs were not a part. "A day at a time" I live a rich and fulfilling life of sobriety. I attend meetings of AA, social gatherings, and help other fellow alcoholics and addicts in their recovery. Through AA/NA I now have freedom to do what I like with the rest of my life.

Logistics

How then are professionals steered to AA? How is AA prescribed? How is attendance monitored?

When I diagnose someone as alcoholic or drug addicted and wish to refer them to AA or NA I first explain the program to them. I try to introduce them to a member of AA or NA who is successfully recovering and can escort the patient to the first meeting. An attempt is made to demographically match the person in recovery to the patient being referred to AA/NA. If no one is available for escort, a call to the AA intergroup offices, the NA headquarters (both are listed in the white pages), or the Med-Chi Impaired Physicians Rehabilitation Program often will produce someone to help a person in their introduction to AA/NA.

An AA or NA directory should be given to the patient. These are easily available, and I recommend keeping a supply of both in the office. There are special interest groups that may be more comfortable for a newcomer to AA/NA. In addition to such special groups as mens, women, agnostics, beginners, etc., in Baltimore and Washington there are health professionals meetings on Thursday and Tuesday evenings, respectively.

Coercion to attend AA/NA may be of value in early recovery. This may come from an employer, friend, or professional society. While long-term recovery is dependent on an individual's desire to stay well, coercion and intervention can motivate someone into early recovery.

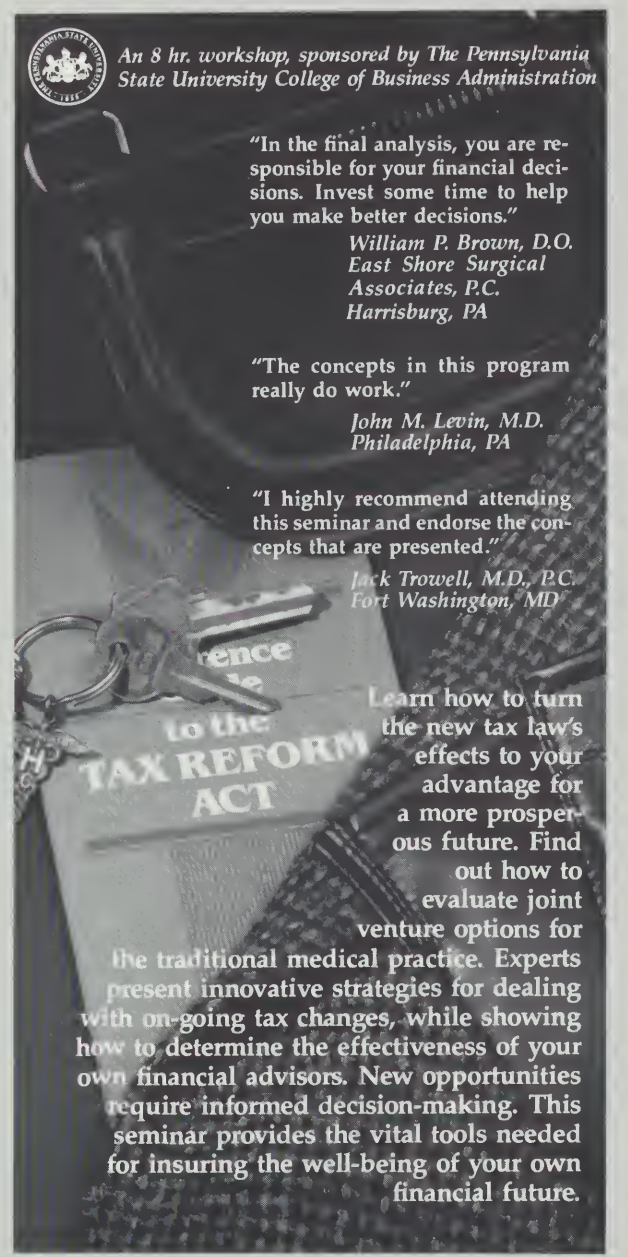
When prescribing AA/NA, I recommend "90 in 90." This is defined as attendance at 90 meetings in 90 days. This is to be followed by a minimum of three meetings weekly for the balance of a two-year treatment contract.

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Monitoring AA/NA attendance may be easy, as some groups will sign slips verifying attendance. If a patient is at a group that will not sign for him, I suggest an honor system. To do this, the patient records the name of the group; the location, day, and time of the meeting; and the topic of discussion. This requires attention to what is going on. In this manner, compliance with AA/NA attendance can be followed.

• • •

We should be appreciative of the crucial role played by AA and NA in the recovery of chemically dependent professionals. I consider AA/NA to be absolutely essential elements of successful recovery from this progressive and potentially lethal disease.



IMPAIRED PHYSICIAN PROGRAM

*CONFIDENTIAL**

DISCREET

SUPPORTIVE

The Impaired Physician Program, sponsored by Med-Chi's Committee on Physician Rehabilitation, deals with any impairment including ALCOHOLISM, DRUG ADDICTION, MENTAL ILLNESS, SENILITY, or PHYSICAL DISABILITY. It's purpose is to help the estimated 15% of physicians who will suffer some form of impairment during their careers.

Most impairments can be treated, but not if they are covered up. It is especially tragic to let someone's career, family, and health deteriorate from a TREATABLE illness.

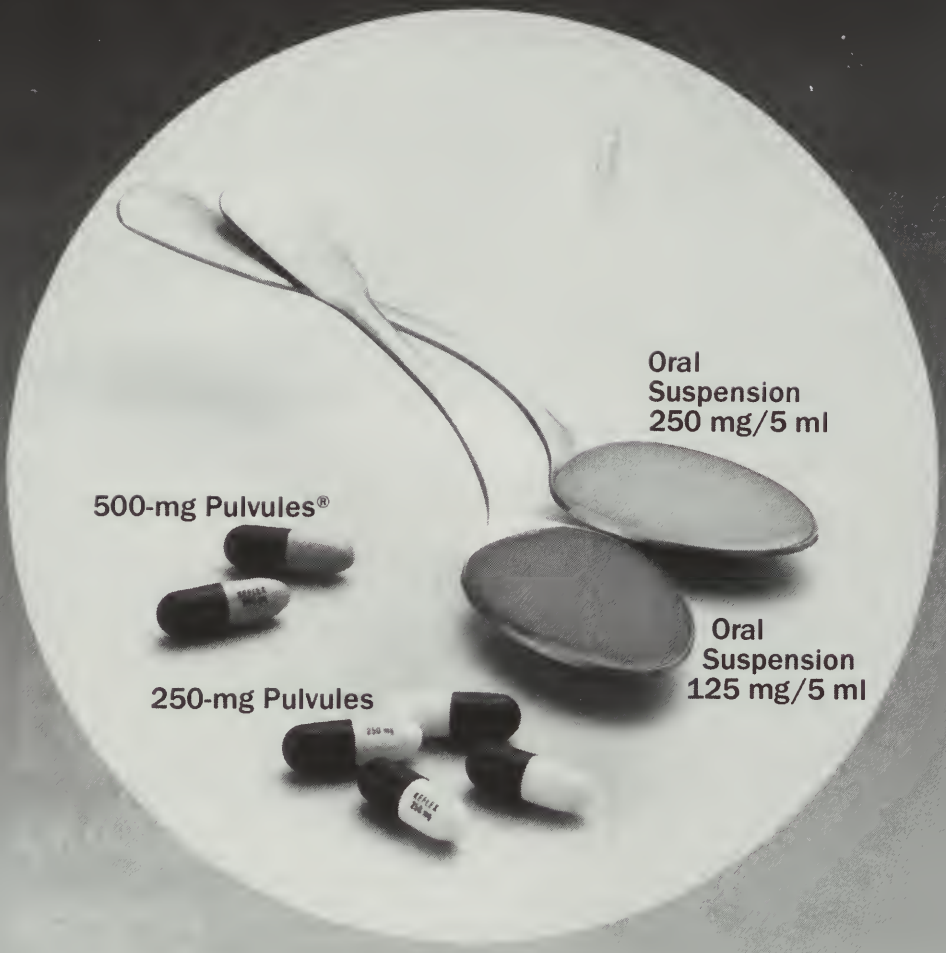
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NOT PART OF THE PROBLEM

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VERYTHING

Effective control time and time again[1]

Effective control of fasting and postprandial glucose—patient after patient, meal after meal, year after year.

Insulin when it's needed

Insulin levels are rapidly elevated in response to a meal, then return promptly to basal levels after the meal challenge subsides.

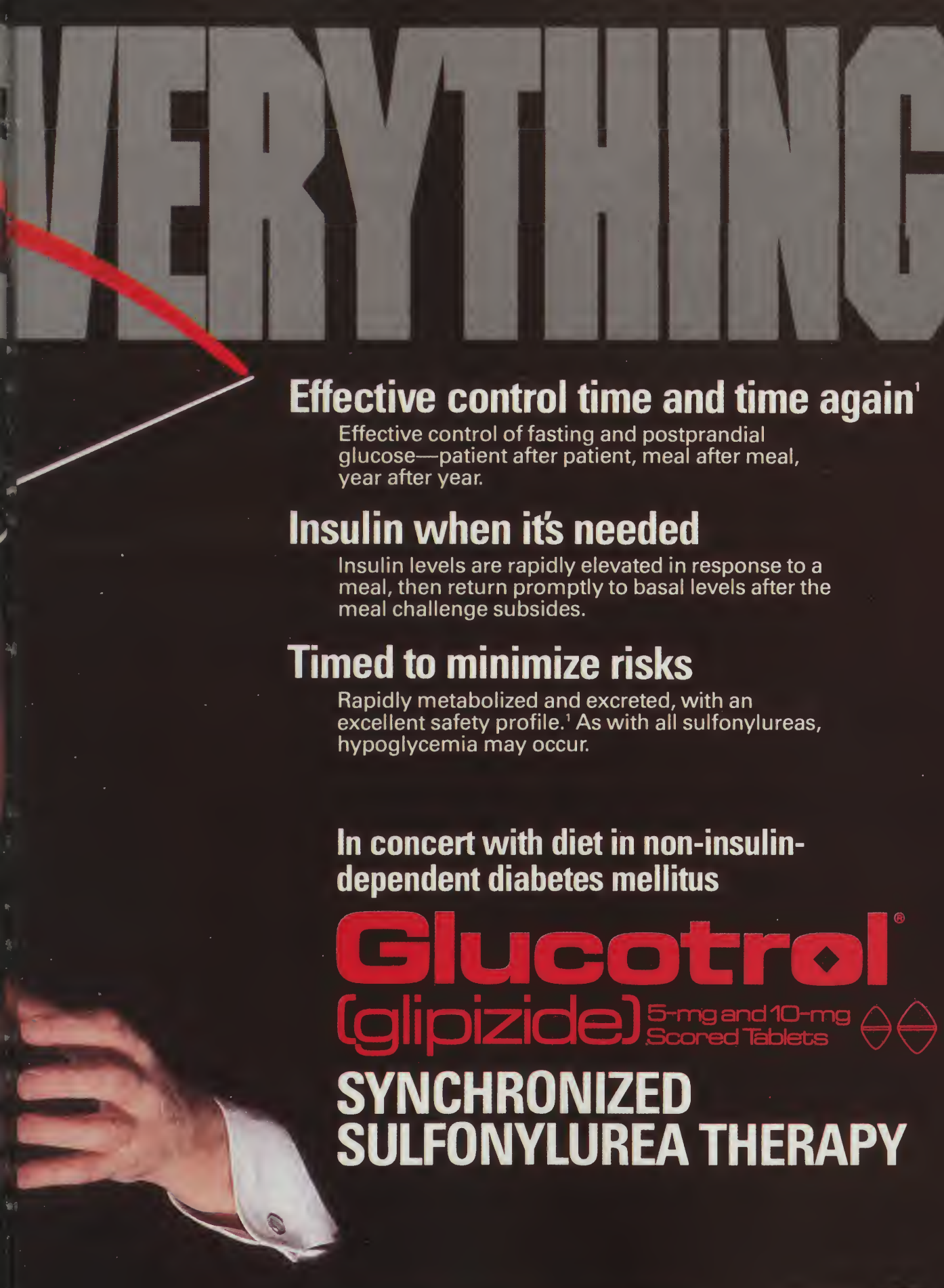
Timed to minimize risks

Rapidly metabolized and excreted, with an excellent safety profile.[1] As with all sulfonylureas, hypoglycemia may occur.

In concert with diet in non-insulin-dependent diabetes mellitus

Glucotrol®

(glipizide) 5-mg and 10-mg Scored Tablets



SYNCHRONIZED SULFONYLUREA THERAPY

Please see brief summary of Glucotrol® (glipizide) prescribing information on next page.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

Reference:
1. Sachs R, Frank M, Fishman SK: Overview of clinical experience with glipizide. In *Glipizide: A Worldwide Review* Princeton, NJ, Excerpta Medica, 1984, pp 163-172.

GLUCOTROL® (glipizide) Tablets
Brief Summary of Prescribing Information

INDICATIONS AND USAGE: GLUCOTROL is indicated as an adjunct to diet for the control of hyperglycemia in patients with non-insulin-dependent diabetes mellitus (NIDDM, type II) after an adequate trial of dietary therapy has proved unsatisfactory.

CONTRAINDICATIONS: GLUCOTROL is contraindicated in patients with known hypersensitivity to the drug or with diabetic ketoacidosis, with or without coma, which should be treated with insulin.

SPECIAL WARNING ON INCREASED RISK OF CARDIOVASCULAR MORTALITY: The administration of oral hypoglycemic drugs has been reported to be associated with increased cardiovascular mortality as compared to treatment with diet alone or diet plus insulin. This warning is based on the study conducted by the University Group Diabetes Program (UGDP), a long-term prospective clinical trial designed to evaluate the effectiveness of glucose-lowering drugs in preventing or delaying vascular complications in patients with non-insulin-dependent diabetes. The study involved 823 patients who were randomly assigned to one of four treatment groups (*Diabetes*, 19, supp. 2:747-830, 1970).

UGDP reported that patients treated for 5 to 8 years with diet plus a fixed dose of tolbutamide (1.5 grams per day) had a rate of cardiovascular mortality approximately 2-1/2 times that of patients treated with diet alone. A significant increase in total mortality was not observed, but the use of tolbutamide was discontinued based on the increase in cardiovascular mortality, thus limiting the opportunity for the study to show an increase in overall mortality. Despite controversy regarding the interpretation of these results, the findings of the UGDP study provide an adequate basis for this warning. The patient should be informed of the potential risks and advantages of GLUCOTROL and of alternative modes of therapy.

Although only one drug in the sulfonylurea class (tolbutamide) was included in this study, it is prudent from a safety standpoint to consider that this warning may also apply to other oral hypoglycemic drugs in this class, in view of their close similarities in mode of action and chemical structure.

PRECAUTIONS: Renal and Hepatic Disease: The metabolism and excretion of GLUCOTROL may be slowed in patients with impaired renal and/or hepatic function. Hypoglycemia may be prolonged in such patients should it occur.

Hypoglycemia: All sulfonylureas are capable of producing severe hypoglycemia. Proper patient selection, dosage, and instructions are important to avoid hypoglycemia. Renal or hepatic insufficiency may increase the risk of hypoglycemic reactions. Elderly, debilitated or malnourished patients and those with adrenal or pituitary insufficiency are particularly susceptible to the hypoglycemic action of glucose-lowering drugs. Hypoglycemia may be difficult to recognize in the elderly or people taking beta-adrenergic blocking drugs. Hypoglycemia is more likely to occur when caloric intake is deficient, after severe or prolonged exercise, when alcohol is ingested, or when more than one glucose-lowering drug is used.

Loss of Control of Blood Glucose: A loss of control may occur in diabetic patients exposed to stress such as fever, trauma, infection or surgery. It may then be necessary to discontinue GLUCOTROL and administer insulin.

Laboratory Tests: Blood and urine glucose should be monitored periodically. Measurement of glycosylated hemoglobin may be useful.

Information for Patients: Patients should be informed of the potential risks and advantages of GLUCOTROL, of alternative modes of therapy, as well as the importance of adhering to dietary instructions, of a regular exercise program, and of regular testing of urine and/or blood glucose. The risks of hypoglycemia, its symptoms and treatment, and conditions that predispose to its development should be explained to patients and responsible family members. Primary and secondary failure should also be explained.

Drug Interactions: The hypoglycemic action of sulfonylureas may be potentiated by certain drugs including nonsteroidal anti-inflammatory agents and other drugs that are highly protein bound, salicylates, sulfonamides, chloramphenicol, probenecid, coumarins, monoamine oxidase inhibitors, and beta adrenergic blocking agents. *In vitro* studies indicate that GLUCOTROL binds differently than tolbutamide and does not interact with salicylate or dicumarol. However, caution must be exercised in extrapolating these findings to a clinical situation. Certain drugs tend to produce hyperglycemia and may lead to loss of control, including the thiazides and other diuretics, corticosteroids, phenothiazines, thyroid products, estrogens, oral contraceptives, phenytoin, nicotinic acid, sympathomimetics, calcium channel blocking drugs, and isoniazid. A potential interaction between oral miconazole and oral hypoglycemic agents leading to severe hypoglycemia has been reported. Whether this interaction also occurs with the intravenous, topical, or vaginal preparations of miconazole is not known.

Carcinogenesis, Mutagenesis, Impairment of Fertility: A 20-month study in rats and an 18-month study in mice at doses up to 75 times the maximum human dose revealed no evidence of drug-related carcinogenicity. Bacterial and *in vivo* mutagenicity tests were uniformly negative. Studies in rats of both sexes at doses up to 75 times the human dose showed no effects on fertility.

Pregnancy: Pregnancy Category C: GLUCOTROL (glipizide) was found to be mildly tetotoxic in rat reproductive studies at all dose levels (5-50 mg/kg). This tetotoxicity has been similarly noted with other sulfonylureas, such as tolbutamide and tolazamide. The effect is perinatal and believed to be directly related to the pharmacologic (hypoglycemic) action of GLUCOTROL. In studies in rats and rabbits no teratogenic effects were found. There are no adequate and well controlled studies in pregnant women. GLUCOTROL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Because recent information suggests that abnormal blood glucose levels during pregnancy are associated with a higher incidence of congenital abnormalities, many experts recommend that insulin be used during pregnancy to maintain blood glucose levels as close to normal as possible.

Nonteratogenic Effects: Prolonged severe hypoglycemia has been reported in neonates born to mothers who were receiving a sulfonylurea drug at the time of delivery. This has been reported more frequently with the use of agents with prolonged half-lives. GLUCOTROL should be discontinued at least one month before the expected delivery date.

Nursing Mothers: Since some sulfonylurea drugs are known to be excreted in human milk, insulin therapy should be considered if nursing is to be continued.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS: In controlled studies, the frequency of serious adverse reactions reported was very low. Of 702 patients, 11.8% reported adverse reactions and in only 1.5% was GLUCOTROL discontinued.

Hypoglycemia: See PRECAUTIONS and OVERDOSAGE sections.

Gastrointestinal: Gastrointestinal disturbances, the most common, were reported with the following approximate incidence: nausea and diarrhea, one in 70; constipation and gastralgia, one in 100. They appear to be dose-related and may disappear on division or reduction of dosage. Chloestatic jaundice may occur rarely with sulfonylureas: GLUCOTROL should be discontinued if this occurs.

Dermatologic: Allergic skin reactions including erythema, morbilliform or maculopapular eruptions, urticaria, pruritus, and eczema have been reported in about one in 70 patients. These may be transient and may disappear despite continued use of GLUCOTROL; if skin reactions persist, the drug should be discontinued. Porphyria cutanea tarda and photosensitivity reactions have been reported with sultonylureas.

Hematologic: Leukopenia, agranulocytosis, thrombocytopenia, hemolytic anemia, aplastic anemia, and pancytopenia have been reported with sultonylureas.

Metabolic: Hepatic porphyria and disulfiram-like alcohol reactions have been reported with sultonylureas. Clinical experience to date has shown that GLUCOTROL has an extremely low incidence of disulfiram-like reactions.

Endocrine Reactions: Cases of hyponatremia and the syndrome of inappropriate antidiuretic hormone (SIADH) secretion have been reported with this and other sultonylureas.

Miscellaneous: Dizziness, drowsiness, and headache have been reported in about one in fifty patients treated with GLUCOTROL. They are usually transient and seldom require discontinuance of therapy.

OVERDOSAGE: Overdosage of sulfonylureas including GLUCOTROL can produce hypoglycemia. If hypoglycemic coma is diagnosed or suspected, the patient should be given a rapid intravenous injection of concentrated (50%) glucose solution. This should be followed by a continuous infusion of a more dilute (10%) glucose solution at a rate that will maintain the blood glucose at a level above 100 mg/dL. Patients should be closely monitored for a minimum of 24 to 48 hours since hypoglycemia may recur after apparent clinical recovery. Clearance of GLUCOTROL from plasma would be prolonged in persons with liver disease. Because of the extensive protein binding of GLUCOTROL (glipizide), dialysis is unlikely to be of benefit.

DOSAGE AND ADMINISTRATION: There is no fixed dosage regimen for the management of diabetes mellitus with GLUCOTROL; in general, it should be given approximately 30 minutes before a meal to achieve the greatest reduction in postprandial hyperglycemia.

Initial Dose: The recommended starting dose is 5 mg before breakfast. Geriatric patients or those with liver disease may be started on 2.5 mg. Dosage adjustments should ordinarily be in increments of 2.5-5 mg, as determined by blood glucose response. At least several days should elapse between titration steps.

Maximum Dose: The maximum recommended total daily dose is 40 mg.

Maintenance: Some patients may be effectively controlled on a once-a-day regimen, while others show better response with divided dosing. Total daily doses above 15 mg should ordinarily be divided.

HOW SUPPLIED: GLUCOTROL is available as white, dye-free, scored diamond-shaped tablets imprinted as follows: 5 mg tablet—Pfizer 411 (NOC 5 mg 0049-4110-66) Bottles of 100; 10 mg tablet—Pfizer 412 (NOC 10 mg 0049-4120-65) Bottles of 100.

CAUTION: Federal law prohibits dispensing without prescription.

More detailed professional information available on request.

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J-6138 January 1986


There's never been
a better time for her...
and
PREMARIN®
(Conjugated Estrogens Tablets)

Now the evidence looks better than ever

Significantly reduced risk of endometrial hyperplasia

Endometrial hyperplasia was significantly reduced when progestin was added to PREMARIN therapy for more than ten days a month.[1-4] The risk of endometrial hyperplasia may also be reduced through cyclic administration of unopposed, low-dose PREMARIN.

Effect on lipids—an important feature

PREMARIN used alone does not adversely affect lipid levels. In fact, a clinical study has shown a significant increase in HDL cholesterol—from 49.7 mg/dL to 56.4 mg/dL—and decrease in LDL cholesterol—from 165.1 mg/dL to 138.1 mg/dL—after one year of therapy with PREMARIN, 0.625 mg.[5]

Low-dose control of menopausal symptoms*

PREMARIN effectively relieves vasomotor symptoms, such as hot flashes. When estrogen deficiency is limited to atrophic vaginitis, PREMARIN® (conjugated estrogens) Vaginal Cream restores the vaginal environment to its premenopausal state.

The most widely used, most extensively studied estrogen worldwide.

PREMARIN®

(Conjugated Estrogens Tablets)

Most trusted for more reasons

*PREMARIN is indicated for moderate-to-severe vasomotor symptoms.

Please see following page for brief summary of prescribing information.

For moderate-to-severe vasomotor symptoms

PREMARIN®
(Conjugated Estrogens Tablets)



0.3 mg 0.625 mg 0.9 mg 1.25 mg 2.5 mg

The appearance of these tablets is a trademark of Ayerst Laboratories.

For atrophic vaginitis

PREMARIN®
(Conjugated Estrogens)

Vaginal Cream

0.625mg/g



BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION AND PATIENT INFORMATION, SEE PACKAGE CIRCULARS.)*

PREMARIN® Brand of conjugated estrogens tablets, USP
PREMARIN® Brand of conjugated estrogens Vaginal Cream in a nonliquefying base

1. ESTROGENS HAVE BEEN REPORTED TO INCREASE THE RISK OF ENDOMETRIAL CARCINOMA.

Three independent case control studies have reported an increased risk of endometrial cancer in postmenopausal women exposed to exogenous estrogens for more than one year. This risk was independent of the other known risk factors for endometrial cancer. These studies are further supported by the finding that incidence rates of endometrial cancer have increased sharply since 1969 in eight different areas of the United States with population-based cancer reporting systems, an increase which may be related to the rapidly expanding use of estrogens during the last decade. The three case control studies reported that the risk of endometrial cancer in estrogen users was about 4.5 to 13.9 times greater than in nonusers. The risk appears to depend on both duration of treatment and on estrogen dose. In view of these findings, when estrogens are used for the treatment of menopausal symptoms, the lowest dose that will control symptoms should be utilized and medication should be discontinued as soon as possible. When prolonged treatment is medically indicated, the patient should be reassessed on at least a semiannual basis to determine the need for continued therapy. Although the evidence must be considered preliminary, one study suggests that cyclic administration of low doses of estrogen may carry less risk than continuous administration; it therefore appears prudent to utilize such a regimen. Close clinical surveillance of all women taking estrogens is important. In all cases of undiagnosed persistent or recurring abnormal vaginal bleeding, adequate diagnostic measures should be undertaken to rule out malignancy. There is no evidence at present that "natural" estrogens are more or less hazardous than "synthetic" estrogens at equiestrogenic doses.

2. ESTROGENS SHOULD NOT BE USED DURING PREGNANCY.

The use of female sex hormones, both estrogens and progestogens, during early pregnancy may seriously damage the offspring. It has been shown that females exposed in utero to diethylstilbestrol, a non-steroidal estrogen, have an increased risk of developing in later life a form of vaginal or cervical cancer that is ordinarily extremely rare. This risk has been estimated as not greater than 4 per 1,000 exposures. Furthermore, a high percentage of such exposed women (from 30% to 90%) have been found to have vaginal adenosis, epithelial changes of the vagina and cervix. Although these changes are histologically benign, it is not known whether they are precursors of malignancy. Although similar data are not available with the use of other estrogens, it cannot be presumed they would not induce similar changes. Several reports suggest an association between intrauterine exposure to female sex hormones and congenital anomalies, including congenital heart defects and limb reduction defects. One case control study estimated a 4.7-fold increased risk of limb reduction defects in infants exposed in utero to sex hormones (oral contraceptives, hormone withdrawal tests for pregnancy, or attempted treatment for threatened abortion). Some of these exposures were very short and involved only a few days of treatment. The data suggest that the risk of limb reduction defects in exposed fetuses is somewhat less than 1 per 1,000. In the past, female sex hormones have been used during pregnancy in an attempt to treat threatened or habitual abortion. There is considerable evidence that estrogens are ineffective for these indications, and there is no evidence from well controlled studies that progestogens are effective for these uses. If PREMARIN is used during pregnancy, or if the patient becomes pregnant while taking this drug, she should be apprised of the potential risks to the fetus, and the advisability of pregnancy continuation.

DESCRIPTION: PREMARIN (conjugated estrogens, USP) contains a mixture of estrogens, obtained exclusively from natural sources, blended to represent the average composition of material derived from pregnant mares' urine. It contains estrone, equilin, and 17α-dihydroequilin, together with smaller amounts of 17α-estradiol, equilenin, and 17α-dihydroequilenin as salts of their sulfate esters. Tablets are available in 0.3 mg, 0.625 mg, 0.9 mg, 1.25 mg, and 2.5 mg strengths of conjugated estrogens. Cream is available as 0.625 mg conjugated estrogens per gram.

INDICATIONS AND USAGE: PREMARIN (conjugated estrogens tablets, USP): Moderate-to-severe *vasomotor* symptoms associated with the menopause. (There is no evidence that estrogens are effective for nervous symptoms or depression without associated vasomotor symptoms and they should not be used to treat such conditions.) **Osteoporosis (abnormally low bone mass).** Atrophic vaginitis. Kraurosis vulvae. Female castration.

PREMARIN (conjugated estrogens) Vaginal Cream is indicated in the treatment of atrophic vaginitis and kraurosis vulvae. PREMARIN HAS NOT BEEN SHOWN TO BE EFFECTIVE FOR ANY PURPOSE DURING PREGNANCY AND ITS USE MAY CAUSE SEVERE HARM TO THE FETUS (SEE BOXED WARNING).

Concomitant Progestin Use: The lowest effective dose appropriate for the specific indication should be utilized. Studies of the addition of a progestin for 7 or more days of a cycle of estrogen administration have reported a lowered incidence of endometrial hyperplasia. Morphological and biochemical studies of the endometrium suggest that 10 to 13 days of progestin are needed to provide maximal maturation of the endometrium and to eliminate any hyperplastic changes. Whether this will provide protection from endometrial carcinoma has not been clearly established. There are possible additional risks which may be associated with the inclusion of progestin in estrogen replacement regimens. (See PRECAUTIONS.) The choice of progestin and dosage may be important; product labeling should be reviewed to minimize possible adverse effects.

CONTRAINDICATIONS: Estrogens should not be used in women (or men) with any of the following conditions: 1. Known or suspected cancer of the breast except in appropriately selected patients being treated for metastatic disease. 2. Known or suspected estrogen-dependent neoplasia. 3. Known or suspected pregnancy (See Boxed Warning). 4. Undiagnosed abnormal genital bleeding. 5. Active thrombophlebitis or thromboembolic disorders. 6. A past history of thrombophlebitis, thrombosis, or thromboembolic disorders associated with previous estrogen use (except when used in treatment of breast or prostatic malignancy).

WARNINGS: Long-term continuous administration of natural and synthetic estrogens in certain animal species increases the frequency of carcinomas of the breast, cervix, vagina, and liver. There are now reports that estrogens increase the risk of carcinoma of the endometrium in humans. (See Boxed Warning.) At the present time there is no satisfactory evidence that estrogens given to postmenopausal women increase the risk of cancer of the breast, although a recent study has raised this possibility. There is a need for caution in prescribing estrogens for women with a strong family history of breast cancer or who have breast nodules, fibrocystic disease, or abnormal mammograms. A recent study has reported a 2- to 3-fold increase in the risk of surgically confirmed gallbladder disease in women receiving postmenopausal estrogens.

Adverse effects of oral contraceptives may be expected at the larger doses of estrogen used to treat prostatic or breast cancer or postpartum breast engorgement; it has been shown that there is an increased risk of thrombosis in men receiving estrogens for prostatic cancer and women for postpartum breast engorgement. Users of oral contraceptives have an increased risk of diseases, such as thrombophlebitis, pulmonary embolism, stroke, and myocardial infarction. Cases of retinal thrombosis, mesenteric thrombosis, and optic neuritis have been reported in oral contraceptive users. An increased risk of postsurgery thromboembolic complications has also been reported in users of oral contraceptives. If feasible, estrogen should be discontinued at least 4 weeks before surgery of the type associated with an increased risk of thromboembolism, or during periods of prolonged immobilization. Estrogens should not be used in persons with active thrombophlebitis, thromboembolic disorders, or in persons with a history of such disorders in association with estrogen use. They should be used with caution in patients with cerebral vascular or coronary artery disease. Large doses (5 mg conjugated estrogens per day), comparable to those used to treat cancer of the prostate and breast, have been shown to increase the risk of nonfatal myocardial infarction, pulmonary embolism and thrombophlebitis. When doses of this size are used, any of the thromboembolic and thrombotic adverse effects should be considered a clear risk.

Benign hepatic adenomas should be considered in estrogen users having abdominal pain and tenderness, abdominal mass, or hypovolemic shock. Hepatocellular carcinoma has been reported in women taking estrogen-containing oral contraceptives. Increased blood pressure may occur with use of estrogens in the menopause and blood pressure should be monitored with estrogen use. A worsening of glucose tolerance has been observed in patients on estrogen-containing oral contraceptives. For this reason, diabetic patients should be carefully observed. Estrogens may lead to severe hypercalcemia in patients with breast cancer and bone metastases.

PRECAUTIONS: Physical examination and a complete medical and family history should be taken prior to the initiation of any estrogen therapy with special reference to blood pressure, breasts, abdomen, and pelvic organs, and should include a Papanicolaou smear. As a general rule, estrogen should not be prescribed for longer than one year without another physical examination being performed. Conditions influenced by fluid retention such as asthma, epilepsy, migraine, and cardiac or renal dysfunction, require careful observation. Certain patients may develop manifestations of excessive estrogenic stimulation, such as abnormal or excessive uterine bleeding, mastodynia, etc. Prolonged administration of unopposed estrogen therapy has been reported to increase the risk of endometrial hyperplasia in some patients. Oral contraceptives appear to be associated with an increased incidence of mental depression. Patients with a history of depression should be carefully observed. Preexisting uterine leiomyomata may increase in size during estrogen use. The pathologist should be advised of estrogen therapy when relevant specimens are submitted. If jaundice develops in any patient receiving estrogen, the medication should be discontinued while the cause is investigated. Estrogens should be used with care in patients with impaired liver function, renal insufficiency, metabolic bone diseases associated with hypercalcemia, or in young patients in whom bone growth is not complete. If concomitant progestin therapy is used, potential risks may include adverse effects on carbohydrate and lipid metabolism.

The following changes may be expected with larger doses of estrogen:

a. Increased sulfobromophthalein retention.

b. Increased prothrombin and factors VII, VIII, IX, and X; decreased antithrombin 3; increased norepinephrine-induced platelet aggregability.

c. Increased thyroid binding globulin (TBG) leading to increased circulating total thyroid hormone, as measured by PBI, T4 by column, or T4 by radioimmunoassay. Free T3 resin uptake is decreased, reflecting the elevated TBG; free T4 concentration is unaltered.

d. Impaired glucose tolerance.

e. Oecreased pregnanediol excretion.

f. Reduced response to metyrapone test.

g. Reduced serum folate concentration.

h. Increased serum triglyceride and phospholipid concentration. As a general principle, the administration of any drug to nursing mothers should be done only when clearly necessary since many drugs are excreted in human milk.

ADVERSE REACTIONS: The following have been reported with estrogenic therapy, including oral contraceptives: breakthrough bleeding, spotting, change in menstrual flow; dysmenorrhea; premenstrual-like syndrome; amenorrhea during and after treatment; increase in size of uterine fibromyomata; vaginal candidiasis, change in cervical erosion and in degree of cervical secretion; cystitis-like syndrome; tenderness, enlargement, secretion (of breasts); nausea, vomiting, abdominal cramps, bloating; cholestatic jaundice; chloasma or melasma which may persist when drug is discontinued; erythema multiforme; erythema nodosum; hemorrhagic eruption; loss of scalp hair; hirsutism; steepening of corneal curvature; intolerance to contact lenses; headache, migraine, dizziness, mental depression, chorea; increase or decrease in weight; reduced carbohydrate tolerance; aggravation of porphyria; edema; changes in libido.

ACUTE OVERDOSAGE: May cause nausea, and withdrawal bleeding may occur in females.

DOSAGE AND ADMINISTRATION:

PREMARIN® Brand of conjugated estrogens tablets, USP

1. *Given cyclically for short-term use only.* For treatment of moderate to severe *vasomotor* symptoms, atrophic vaginitis, or kraurosis vulvae associated with the menopause (0.3 to 1.25 mg or more daily). The lowest dose that will control symptoms should be chosen and medication should be discontinued as promptly as possible. Administration should be cyclic (eg, three weeks on and one week off). Attempts to discontinue or taper medication should be made at three- to six-month intervals.

2. *Given cyclically:* Female castration. Osteoporosis. Female castration—1.25 mg daily, cyclically. Adjust upward or downward according to response of the patient. For maintenance, adjust dosage to lowest level that will provide effective control. Osteoporosis —0.625 mg daily. Administration should be cyclic (eg, three weeks on and one week off).

Patients with an intact uterus should be monitored for signs of endometrial cancer and appropriate measures taken to rule out malignancy in the event of persistent or recurring abnormal vaginal bleeding.

PREMARIN® Brand of conjugated estrogens Vaginal Cream

Given cyclically for short-term use only. For treatment of atrophic vaginitis or kraurosis vulvae.

The lowest dose that will control symptoms should be chosen and medication should be discontinued as promptly as possible.

Administration should be cyclic (eg, three weeks on and one week off).

Attempts to discontinue or taper medication should be made at three-to-six month intervals.

Usual dosage range: 2 to 4 g daily, intravaginally, depending on the severity of the condition.

Treated patients with an intact uterus should be monitored closely for signs of endometrial cancer and appropriate diagnostic measures should be taken to rule out malignancy in the event of persistent or recurring abnormal vaginal bleeding.

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Special Problems in Treatment of the Chemically Impaired Foreign-Born Physician

THOMAS E. NASH MA

Despite the growing awareness of the problem of physicians and other professionals impaired by addiction to mood-altering chemicals, and the growing body of literature relating to their special needs and treatment issues, one subpopulation has been overlooked. The foreign-born and trained physician (particularly from Third World countries with extremely different cultural values and assumptions) is appearing in chemical-dependence treatment settings. He or she brings a set of beliefs, attitudes, family dynamics, and practical problems that are in many ways different and significantly more pronounced than those of the American physician impaired by addiction.

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Once identified and brought into treatment, the physician or other health professional impaired by the disease of chemical dependence faces significant problems in the recovery process. Everyone involved in the process of recovery from an addiction soon realizes that initiating abstinence is merely the beginning rather than the end of their recovery. As many sober alcoholics and addicts state, "quitting is the easy part," making the changes in attitude, belief system, and habits necessary for the maintenance and growth of sobriety is the part that creates real struggles and challenges.

As many state medical societies create committees to monitor physician impairment and the chemical dependence treatment field becomes more sophisticated, the specific needs and concerns of recovering physicians have begun to be identified and documented in the literature.[1–3] Little attention has been focused on the special needs and problems of foreign-born physicians impaired by chemical addiction and involved in an ongoing treatment process under the monitoring of a Committee for Physician Rehabilitation.

In this light I present some clinical observations from my own experience working with this population. This issue is so much in its infancy that there are no experts. A computer search of the general medical, psychiatric, and psychological literature through the medical library at Sheppard Pratt Hospital turned up no citations. Although there are a growing number of articles on the general problems of impaired physicians and impaired professionals, none specifically mentioned or dealt with the special problems of the foreign-born doctor.

The clinical pictures presented here do not represent the experience and dynamics of all foreign-born physicians. My experience is limited to ten subjects, and every trend I have seen has been contradicted by at least one of the physicians I worked with. I only hope to help others in the field look at and begin the discussion necessary to find treatment solutions to the problems these patients have encountered.

Population

All but one physician were born and received the bulk of their education and training in the third world, the underdeveloped, formerly colonized nations of Africa, Asia, and Latin America. The exception is northern European. All are male. Otherwise they have virtually no demographic similarities. The age range is 34 to 62. The drug of choice is as likely to be cocaine, Placidyl, or Halcion as alcohol. The specialties range from cardiology to general surgery to obstetrics and gynecology. Some are extremely successful, by any measure; others eke out a living in the private practice of general medicine warily watching the growth of HMOs. The common denominator has been the fact they have lost control of a mind-altering substance that was having devastating effects on their lives and careers, leading them to treatment.

In all cases each of these men has had a difficult time understanding and accepting their chemical dependence as a disease. It is well documented that impaired physicians have an even harder time with this than most. Pride, shame, arrogance, elitism, and an entrenched belief that "I should have known better," are their roadblocks to the acceptance of the disease concept. For the Asian physician in particular, coming from cultures in which the use of alcohol is much less than in America and culturally regulated by various social taboos, there are fewer models to form a healthy frame of reference. Chemical dependence has not reached the epidemic proportions it has in the West, and therefore these men feel a greater sense of personal shame.

Superior Man

The core concept in Confucian thought, the dominant philosophy of China and countries influenced by Chinese thought, is the belief in the power and influence of the "Superior Man." This is a highly educated and disciplined individual who strives to live his life in a morally and ethically impeccable fashion. By so doing, by sheer force of his ethical fortitude and integrity in the eye of the earthly storms that rage around him, he is able not only to survive and grow through the most adverse of circumstances but also to actually influence others in a dramatic fashion by example. He is therefore

a powerful force for good in the world. Again, the essence of the Superior Man's strength is his overwhelming personal discipline and moral rectitude. Combined with the role of physician as demigod these men have played in their extended families and communities, it is clear to see how much more difficult it can be for them to accept the fundamental principles constituting the first step of treatment as well as the recovery self-help groups: accepting on an emotional level a belief of personal powerlessness to control the addiction and that one's life is truly falling apart at the seams. Or, as the founders of Alcoholics Anonymous called it, ego deflation.

The role these individuals played in their families, (both immediate family and extended) exacerbates both the difficulty in achieving a thorough self-diagnosis of addiction as a disease and the level of dysfunctional guilt and shame that surrounds the disease and its associated behavior.

These are without exception the heroes, the princes, of their families. They are usually the oldest son, and cultural tradition demands that as such they take on the role. Often their medical license and practice represents years of struggle and self-sacrifice on the part of their families.

The physician himself has had to struggle. In some cases the leap up the ladder of social class is truly astounding: from village to a practice in a major metropolitan area in the U.S., overcoming not just poverty but in some cases, physical disability, and almost always, racism (overt or covert) in the establishment and maintenance of their practice. They are achievers who have accomplished a major feat that takes years of struggle, effort, and discipline. The message to self and family: I can do it, I can handle it. There is no problem too great for me to overcome with your support. Then we treatment professionals tell them they are powerless and their family and their discipline can do nothing to change that fact.

Family Esteem

It is important to the entire family, often the entire extended family, to have a successful professional, especially a physician, represent the family to the outside world. Much of the family's self-esteem derives from having been able, through sacrifice, to produce and educate a son who has a successful professional career. The more successful, the better, and the greater the family's esteem. America represents the culmination of these collective dreams. To raise a son to be a physician, and more, have him move to America and become wealthy, accomplished, and successful beyond hope, is a miracle.

As a result, the physician in question carries the responsibility not only for himself and his own immediate family, but that of a large family "back home" who rely on him and his professional success to feel good about themselves and their competence as a family. Once again, this buttresses the process of denial, making it difficult for this physician to honestly delve into his behavior while under the influence of addiction and deal with the real consequences of that addiction.

To admit to alcoholism, or any other addiction, and to the consequent unmanageability of his life, becomes not only an admission of weakness for the third-world physician, but also an admission of having failed the family that worked so hard to make him what he is.

When the circumstances of the foreign-born physician's addiction get to the point where he is identified, confronted, and brought into treatment, family dynamics come into play in a way that prevents family engagement in the treatment process. In both inpatient and outpatient treatment settings, family involvement has been a major problem and has been accomplished only when it was a condition of the individual's treatment contract with the Committee for Physician Rehabilitation. Even then, the compliance of family members has been superficial and minimal.

What accounts for this? First, the denial of those family members for all the same reasons given above. The physicians are the heroes of the immediate family here in the U.S. as well as the larger extended family "back home." Additionally, there is the cultural issue of how therapy is viewed, its role in relationship to the family, and some real fears about financial and business ramifications.

We live in a society where therapy is becoming more and more a part of the fabric of life. Most urban Americans know someone quite well who has needed professional help, if not themselves. Therapy, while still a subject of some skepticism, is generally accepted. In particular, we see an ever-increasing number of celebrities in the entertainment, sports, and even political arenas seeking treatment for alcoholism and addiction. In third-world cultures, from where these physicians come, therapy in general is a completely foreign and somewhat bizarre concept. To talk about personal matters to a stranger is bad enough; to talk specifically about matters to which you attach feelings of great shame, guilt, weakness, and personal failure, is even worse. To pay that stranger for the dubious right to do so is completely beyond comprehension.

Addiction as Threat to License

Most of these physicians enter treatment for one reason only: they believe their license is threatened. This endangers their entire sense of who and what they are, and what their world is all about. To lose their license and be denied the right to practice medicine would shake the foundation of their universe. They come to treatment only under duress and approach the treatment process with profound suspicion and wariness.

In terms of superficial compliance, they are an addictions treatment specialist's dream. They are in fear of the loss of income, esteem, and sense of who they are. Besides, they are the family heroes and always have been compliant. Yet truly engaging them in treatment, whereby they use treatment for more than simple monitoring of attendance at AA or NA meetings, urinalysis, and antabuse or naltrexone, is very difficult. They're here, and they'll do what you tell them to. Communicating on an intimate, emotional level outside the safety and closed fabric of the family, takes an enormous amount of work, for it is in contradiction to very powerful cultural imperatives.

Even when this is accomplished, the willingness of other family members to get involved is limited. It is seen in the context of the physician taking on one more distasteful task in the pursuit and defense of his and the family's success. He has taken on and persevered through many other such tasks previously. For the other family members to join would be not only unpalatable but also an absolute betrayal. Family loyalty comes first. The physician's "trouble" with the committee is something to be dealt with and endured. The physician's participation in treatment, though not understood, is tolerable. The family's involvement is not.

Furthermore, there is a strong desire to suppress the whole thing. The greatest fear of these physicians and their families is that the unfortunate situation may have a negative impact on the physician's and family's reputation and, eventually, a financial impact. There is a sense that the fewer family members are involved in treatment, putting themselves in a position to be seen going in or coming out of the clinic or hospital, the better.

Economics and Racism

This brings up the truly pragmatic issues these physicians deal with as part of their treatment. Economics and racism are realities that alcoholics or addicts in early enforced recovery and entrenched denial easily can use as a maneuver to defocus and to avoid the task of dealing with their addiction. These are real and thorny issues, but the clinician must avoid being drawn into debate over them and must continue to push for a self-diagnosis despite the issues.

In an age of the growth of Health Maintenance Organizations and Preferred Provider Organizations, the foreign-born and trained physician in private practice feels especially vulnerable. Negative media coverage of offshore medical schools selling diplomas has developed a generalized, skeptical public opinion about foreign-born and trained physicians. This is often exacerbated by racism. Together, these factors put many of these physicians in a panic about their economic viability and ability to compete successfully.

Some of these physicians have spent a major portion of their careers feeling discriminated against, looked down on by American physicians, other health care professionals, hospital staff, and patients. They have felt a need to be "better," that is, even better trained, more professional, more of everything, in order to compete. They have felt a need to continuously prove themselves. In their own perception, being "found out" as alcoholics or addicts would be the death knell to their practices. Thus, they not only are more resistant to admitting their addiction but also far more mistrustful and suspicious regarding the issues of patient confidentiality, group boundaries, avoiding the use of last names in group, and so forth.

Again, these are issues that all impaired physicians, professionals, and to a lesser extent, all recovering people face and must learn to deal with. The *degree* to which these factors play an important part in treatment and recovery of foreign-born physicians must be understood and taken into account by the treatment team in developing and implementing a successful treatment plan. We cannot expect them to react the same as other patients in our care. Ultimately, they have the same disease with the same treatment: self-diagnosis, abstinence, and the development of a support system and life-style conducive to maintaining abstinence. However, the specific strategies and interventions to help these physicians-turned-patient implement that treatment must take all these factors into account.

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Malpractice Stress Syndrome: A New Diagnosis?

EDWARD G. READING MDiv

With the onset of massive public and professional awareness of malpractice litigation among health care professionals, clinical practitioners are beginning to document stress reactions caused by this process. Reactions to malpractice litigation appear to have the basis for symptomological identification that, if not dealt with in early stages, might progress into diseases of impairment (depression, substance abuse, etc.) or might lead to unnecessary premature retirement. Self-help/mutual-help peer group therapy to deal with early symptoms may prevent related problems.

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The "malpractice stress syndrome" is a new phenomenon in American life. Initially the syndrome was identified with the medical profession, but with increasing frequency the effects of malpractice stress are being felt by other professional practitioners including (but not limited to) nurses, dentists, psychologists, clergy, and lawyers. When a practitioner is sued for malpractice, he or she feels the attack on professional skills and personal integrity. It is the challenge to the personal integrity of the professional that is at the center of the malpractice stress syndrome.

To understand this syndrome, we need to look at the documentation of symptomatology that develops as a result of malpractice litigation. Little formal research has been done in this area except for physician studies. The two pioneering studies done in this field were by Sara Charles MD, a psychiatrist. She is also co-author with her husband, Eugene Kennedy, of *Defendant: A Psychiatrist on Trial for Medical Malpractice* (New York: Free Press of MacMillan, 1985).

Of these two studies, the first was of physicians sued for malpractice in Cook County, Illinois; the second, a study of sued and unsued physician-members of the Chicago Medical Society. A number of significant issues surfaced, bringing to light the personal impact of malpractice stress. It remains to be seen whether the syndrome develops in the same manner with other professions.

Isolation Of the physicians involved in the study, 31.4 percent felt "alone in my effort to vindicate myself"; but only 10 percent sought moral support from peers. In ways similar to how people tend to avoid a person with terminal illness, other physicians frequently avoid the physician being sued. They may express sorrow, sympathy, and pity, but generally there is failure to express "empathy," in part due to an aversion of facing personal vulnerability.

Negative Self-image Defendent physicians feel misunderstood (41.2 percent), defeated (34 percent), decreased self-confidence (31.4 percent), lower self-esteem (27.3 percent), and shame (14.4 percent).

Emotional Impact More than half the responding physicians in these studies experienced anger, inner tension, depressed mood, frustration, irritability, and insomnia. In one study of Cook County physicians who were sued, it was found that 39.1 percent had experienced "major depressive disorder," and 26.6 percent of the physicians had these symptoms for more than two weeks. More than 20 percent experienced pervasive anger accompanied by at least four of the following symptoms: depressed mood, inner tension, frustration, irritability, insomnia, fatigue, gastrointestinal symptoms, and headache.

Other Effects About 36 percent of sued physicians reported difficulty concentrating, 29 percent decreased sex drive, and 27 percent noted decreased appetite. Between 5 percent and 8 percent developed physical illness, between 7.4 percent and 9 percent experienced exacerbation of previously diagnosed illness (for examples, angina, duodenal ulcer, spastic colon, and hypertension).

Complex Issues

If we note all the above issues, we can see a very complex combination of physiological, emotional, and spiritual issues that have impact on the physician. The ripple effect also brings a high risk to domestic stability. Additionally, the isolation felt by the physician also is experienced by other members of his or her family. While one study found that half the claims filed were dropped, many remained active for 24 to 38 months.

Self-Help Approach

Some of the generic characteristics of self-help groups are that the group members are peers in that they share a common problem. Groups are formed by the members to deal with and overcome their common problems. Self-help groups tend to develop around needs not being dealt with by the established resources. This is most noticeable with Alcoholics Anonymous (AA) and Narcotics Anonymous (NA) in their experience that traditional medicine (especially traditional psychiatry) was not effective in treating chemically addictive diseases.

At present there is no effective professional approach of dealing with malpractice stress. Self-help groups

involve face-to-face interaction among the members providing help and support through the efforts, skills, knowledge, and concern of their members. Members are responsible for and have control of the groups. This implies that they are neither financed nor operated by agencies or professionals.

Self-help groups provide these benefits to their members: help members live successfully, drug free, in the midst of a drug-oriented society, with a common viewpoint regarding drug abuse. In cases of malpractice stress, members can live with a sense of some emotional security and stability even when their medical practice is falling apart and with potentially devastating press coverage. A self-help group also can help in dealing with the fears associated with financial insecurity. These groups provide successful "role models" within the group, making advice available from more experienced members to those of lesser experience. They provide a network of new friends and acquaintances both to replace the old "nonunderstanding" friends and to remind the members they are not alone. The groups provide psychological, emotional, social, and spiritual support for each other through an emphasis on personal satisfaction, self-esteem, productivity, and community involvement.

The Impaired Physicians Program of the Medical Society of New Jersey works closely with a number of self-help groups. They include but are not limited to AA and NA for alcoholics and other chemically dependent persons; Al-anon, Narc-anon, Ala-teen, and Tough Love for family members. Emotions Anonymous, Gamblers Anonymous, and suicide survivors groups also are used. Many of our program participants are involved in International Doctors in AA (IDAA).

Another helpful group assisting medical professionals and their families in dealing with (and surviving) malpractice stress is the Litigation Stress Support Group. This group was organized in 1985 by the Auxiliary of the Medical Society of New Jersey, staff of the Medical Society of New Jersey, and the Medical Inter-Insurance Exchange of New Jersey.

It is important to note that while the Impaired Physicians Program refers some of our physicians to these groups, we do not control them or determine their policies or procedures. Successful self-help groups need to remain independent of outside controls.

The Impaired Physicians Program provides assistance in the beginning stages of the group development as a prevention effort for dealing with physician impairment. The group is based on self-help or mutual-help principles that provide peer-group support. The group helps the participants deal with the personal, family, and professional stresses that surface when malpractice litigation becomes an "active participant" in the life of the medical family.

The group is not a lobby-group, it is not a peer review group for individual cases, and it is not a professional therapy group (although it can be therapeutic). The group is one that says "You are not alone, others have gone through the same thing you're going through, and they've survived, and so can you!"

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Adult Children of Alcoholics and Impaired Professionals

CHARLES L. WHITFIELD MD

Well over half of all impaired professionals are adult children of alcoholics or other dysfunctional families. This finding often is an important factor in the onset and maintenance of impairment among professionals.

Dr. Whitfield is in private practice counseling adult children of alcoholics and other dysfunctional families as well as people with alcoholism and other drug problems. He is medical director of The Resource Group, Towson.

In the 1980s, a new movement began to develop in the fields of alcoholism and other chemical dependence as they affect the family. Known as Adult Children of Alcoholics, abbreviated ACoA in eastern U.S. and ACA in western U.S., it has begun to affect major positive changes:

Awakening of these people and their physicians, counselors, and therapists that there is more to recovery than simply "don't drink" (or don't use drugs or don't try to control another's use) and "go to meetings." Many had tried that and while improved, were still unhappy. Many transferred their addiction to food, money, sex, work, unhealthy relationships, or another self-destructive, compulsive behavior.

Validation of their experience of growing up in a dysfunctional family (about 2/3 of all alcoholics did so in an alcoholic family, and nearly all the rest grew up in another kind of dysfunction).

Permission to do the healing work of recovery. In a departure from the usual mental health model of having some sort of "psychopathology," the ACoA movement reframes their suffering from the old view of being bad, sick, crazy, or stupid to having had a normal reaction to an abnormal childhood situation.

Discovery of their identity, their wholeness, and their spirituality. Related to this process, the old-style, conventional, organized religion often encountered by recovering people is giving way to a more expansive, universal, experiential, life- and growth-giving spirituality.

Recovery from their confusion, suffering, and lack of purpose, meaning, and fulfillment in life.

Combining group therapy, self-help groups, education, experiential techniques, spiritual practices, and individual counseling and therapy, this recovery program provides a vehicle for helping reduce the higher risk of impairment seen in adult children of alcoholics.

While there is resistance from many in the addictions field to this new movement (and still more resistance from those in mental health), some labeling it as only a "passing fad," it has tapped into an important and profound part of our suffering and our potential for growth.

This ACoA movement also has begun to affect the mental health field, although with much less impact than it has had on the addictions field. First, many clinicians are beginning to discover that if they look carefully, over half their patients and clients came from an alcoholic or another kind of dysfunctional family, and that there is a respected body of knowledge describing the alcoholic family, including specific treatment skills for effectively helping their patients and clients. Equally important, some mental health workers, including alcohol and drug counselors, are discovering the importance of healing their *own* woundedness, including *their* having grown up in a dysfunctional family. And by doing so, they return their own gift of recovery to their patients and clients.

Impairment among Adult Children

The impairments among adult children of alcoholics may include alcoholism, other chemical dependence, co-dependence, psychological problems, and physical illness. These conditions are described in this issue and elsewhere.[1–5]

How did this movement, which is both grass roots and professional, develop? Beginning in 1935, the Twelve Step movement in Alcoholics Anonymous was founded by Bill Wilson and Bob Smith MD, themselves adult children of alcoholics.

In the 1950s the generic family movement began: the same time of the founding of Al-Anon (1951), for the family and friends of alcoholics. The first formal literature on CoA was Margaret Cork's *The Forgotten Children* in 1969.[6] Since then a plethora of material has been published.

In 1979, the National Institute on Alcoholism held the first national conference on children of alcoholics in Silver Spring, MD. In the 1980s the movement blossomed, with conferences, articles, books, self-help groups, all with an optimistic flavor and a spirit of recovery and unity. In 1983 about 15 clinicians and educators founded the National Association of Children of Alcoholics, which now has a membership approaching 10,000.

I believe this movement will (and it is already beginning to do so) expand from adult children of alcoholics to a broader one including adult children of other troubled and dysfunctional families. Indeed, there is talk of the California-based central office of ACA (Adult Children of Alcoholics self-help program, distinct from an equivalent Al-Anon Adult Children component,

whose central office is in New York) changing the second A in its initials to read Adult Children Anonymous. Already about one in four people who attend self-help groups for adult children of alcoholics identify themselves as adult children of dysfunctional families only.

In just a few years, the adult children movement progressed beyond its formative stages and is well into an explorative, working, and creative stage. Much is to be learned about the diagnosis, dynamics, and treatment of this large and special population, especially regarding how it affects impairment among professionals.

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The Healthy Family: What Is It?

MERVILLE O. VINCENT MD

It is not possible to share the very latest details of research data on families or everything that is known about healthy families. Rather I have chosen to share some things that are believed to be important in making families healthy. Perhaps it will cause you to look at your family and your own role in your family.

Dr. Vincent is Executive Director, The Homewood Sanitarium, Guelph, Ontario, Canada. This article is excerpted from a speech given at AMA's Seventh National Conference: The Impaired Physician, in Chicago, April 1986.

In the past families were thought to have five major functions, all of which tended to hold the family together:

Economic—today everyone can get by on their own;
Protection—today we look to social agencies, police, and government for this;
Religious—today we have turned this over to the churches or denied its necessity;
Education—we've turned over to the school system; and
Status and job training—this is obtained much less from the family than from money, occupation, or looks.

Certain functions that were in the background of families in the past are now in the forefront. These are largely relational functions. Intimacy is of more concern than is protection. The end result is that if one feels lonely, isolated, or alienated in a marriage, solace may be sought elsewhere such as in work, alcohol, other relationships, or may result in depression, chemical dependency, or even suicide. Healthy families are important because they nurture the well-being of all their members.

> We have considerable evidence that the quality of family life is extremely important to our emotional well-being, our happiness, and our mental health as individuals. We know that poor relationships within the family are very strongly related to many of the problems in society such as juvenile delinquency.[1]

In a similar vein, psychiatrist Armand Nicholi noted

> If people suffering from severe non-organic emotional illness have one experience in common, it is the absence of a parent through death, time-demanding job or absence for other reasons ... what has been shown over and over again to contribute the most to emotional development of the child is a close, warm, sustained and continuous relationship with both parents. Yet, the accelerating divorce rate and several other trends in our society today make this most difficult to attain.[2]

Nicholi concludes that families are the vital cells that constitute the flesh and blood of our society. When one family disintegrates so does a part of our society.

Research Findings

While there has been more research on pathology than there has been on healthy families, there is considerable research on healthy family functioning. These are the characteristics of healthy families most frequently mentioned in the literature I reviewed:

- The cornerstone is a good relationship between the marital partners
- Good communication patterns
- Showing appreciation for one another
- Spending time together (including leisure time)
- Commitment to each other and the family group
- Parents and children who learn from each other
- Emotional closeness and shared activities in a context that permits individuality, privacy, differences
- A sense of trust
- Enjoyment of family traditions
- Shared religious core, values, and philosophy of life
- Teaching respect for others
- A sense of play and humor
- Balanced interaction among members without internal cliques or coalitions
- Fostering and sharing responsibilities
- Negotiating differences
- Teaching a sense of right and wrong
- Valuing service to others
- Flexibility and spontaneity in interactions
- Family members feel understood and are understanding
- Being reasonably self-sufficient
- Facing and solving problems, dealing with crises positively, and seeking outside help with problems

Several of these characteristics of healthy families can be enlarged on with the medical family in mind.

A good relationship between marital partners characterizes healthy marriages. The research work of Jerry Lewis and his group once again established the importance of the marital relationship in healthy families. The better the marital relationship, the healthier the family. Healthy marriages were characterized by flexibly shared power and deep levels of intimacy. Couples liked each other and were good friends; in a very close relationship, they were unique individuals. They could tolerate and relish their differences. They had good sexual relations. They were open with their feelings and had high levels of intimacy. When problems occurred they were quickly identified and resolved.[3]

A recent study on vital marriages indicated that marital partners possessed personality needs that promote sexual expressiveness, "otherness" rather than "selfness," determination, and high ego strength.[4]

Noting that the average duration of marriage in the US is 9.4 years, Jeannette and Robert Lauer[5] studied 351 couples married over 15 years. Three hundred of those couples considered themselves happily married. The top seven reasons given by both husbands and wives for their marriage lasting were

- My spouse is my best friend
- I like my spouse as a person
- Marriage is a long-term commitment
- Marriage is sacred
- We agree on aims and goals
- My spouse has grown more interesting
- I want the relationship to succeed

The authors noted three findings that run contrary to much common mythology. Couples with enduring marriages had not made a practice of fighting or expressing anger. Their motto was not "the family that fights together stays together." Second, they did not see marriage as a 50–50 proposition with a 50–50 divide on everything. There was a tendency for each person to emphasize periods of giving and periods of receiving. They seemed prepared to give more than they received in the relationship. The result appeared to be very close to equality of giving and receiving over the long run. Third, they tried to spend as much time together and share as many activities as possible. Preference for shared rather than separate activities was seen as a richness and fulfillment in the relationship rather than a loss of identity.

The healthy family spends time together including leisure time. Those families who spent time together genuinely enjoyed being together and structured their lives so it could happen. They realized it does not happen spontaneously. Togetherness was in all areas of their lives: eating meals, recreation, and work.

Time spent together is the basic requirement for the family that would develop the other characteristics of a healthy family. Authors of *American Couples* noted[6] "In all four kinds of couples, we find that those who spend alot of time away from each other—take separate vacations, have separate friends, dine apart frequently—have a lower survival rate." The same study concluded that a particular risk was the new marriage where the (working) wife is particularly ambitious; not that the wife grew dissatisfied with her marriage, but the more ambitious the wife, the more likely that the husband wanted the relationship to end.[6]

Time spent together allows some other things to happen that are important for families, such as the balanced interaction between all members of the family without the family breaking into cliques or coalitions at times of difficulty, or parents turning to a particular child to have their needs met. This shared time is where a sense of humor and a sense of play can happen, and these too are associated with family health.

Division of Time

Overworked parents expend so much energy and time to meet the needs of their occupations, their personal needs for success and status, as well as providing material and physical needs for their family that there is often little time left to be concerned about human needs such as love and sharing. The result is often tired, exhausted, burnt-out fathers and mothers. Conflict and anger results from this overload. There is little time for togetherness as a family. When there is very little time together, positive emotions are not expressed. There is only time to discipline, to complain, and to correct. Family interactions become tense and infrequent. Individuals seek refuge in their own interests: sports, TV, crafts, and other isolation chambers. Not that these activities are inherently bad, but they often become substitutes for interacting with family members. Other stresses include less time for togetherness between spouses on different work schedules, frequent separation of parents and children through the use of childcare institutions, and the insistence on instant gratification in family life.

Most of the characteristics of a healthy family involve time together. This necessitates setting priorities and taking charge of our lives. We only do this when we recognize its importance for us and our family. Then we set priorities, take greater control of our time and learn to say no. In the meantime many of us get into a pattern of being always busy, always hurried, always behind, always under pressure, and rarely saying no; then we feel trapped.

We all have the same amount of time, the question is: how are we going to use our time? We must control our work schedule so it does not routinely infringe on family time. We must expect the unexpected, therefore we cannot schedule our time too tightly. Stinnett (not a physician) stated

> all of us are busy and we sometimes feel like we have so many things to do that we are pulled in 1,000 different directions at the same time. The strong families experience the same problems. One interesting action that these families expressed was that when life got too hectic—to the extent that they were not spending as much time with their families as they wanted—that they would sit down and make a list of the different activities in which they were involved.[1]

This was followed by hard decisions that deleted some of their activities.

Healthy families have good communication patterns. Members of healthy families spend time talking with each other, and this is closely related to the fact that they spend a lot of time together. They have good communication patterns, with shared thoughts and feelings and are also good listeners. In this way a person indicates that they value the sender, they value the message, and they value themselves even if they are differing with someone.

This communication occurs best in families that are not authoritarian, where power is shared but not abdicated by the parents. Positive verbal and nonverbal communication is important. We all need to know that we are loved, valued, appreciated, accepted, and understood. Healthy families communicate this. At all ages we want to share our intimacies. Healthy families accept the reality and validity of other members' thoughts and feelings even if they differ from their own.

In addition to sheer busyness, television can be a major obstacle to communication in the home. This is at all ages and stages. It led one wife to comment that she was more worried whether there was life after dinner than life after death.

The healthy family shows appreciation. The healthy family shows appreciation for one another, they demonstrate empathy and unconditional love. They support, validate, and nurture each others' emotional needs. The individual is affirmed for whom he or she is and not for looks, money, accomplishments, or any form of productivity. This led family sociologist Urie Bronfenbrenner to define the family "as a group which possess and implements an irrational commitment to the well-being of its members."[7] The implications of this irrational commitment could be for me to go to a ballet with my wife or my wife to go to a hockey game with me. Alternately it might lead to somebody washing someone else's socks and shorts for over 30 years or anyone changing anyone else's diapers.

David Mace, commenting on a study of families that function effectively, noted

> The members of these families liked each other and kept on telling each other that they liked each other. They affirmed each other, gave each other a sense of personal warmth and took every reasonable opportunity to speak and act affectionately. The result, very naturally was that they enjoyed being together and reinforced each other in ways that made their relationships very satisfying.[8]

It is little wonder that William James said "the craving to be appreciated, is a basic human need and the deepest principle of human nature."

When the physician fails to set priorities and has little time or energy left for family members, it is not surprising that the family perceives this as not being appreciated. Just as appreciation is often reciprocated in human relationships so is the lack of it reciprocated. Soon the doctor no longer experiences appreciation at home and finds that he is getting much more appreciation in his work. It is tempting to involve oneself even more in work, and the vicious cycle is compounded, often resulting in many unmet needs for everyone in the medical family. In the short run, there is actually more admiration with less responsibility in the medical activities than there is in the activities in the family. I would suggest in the long run there is potentially more reward in participating in a healthy family than there is in an excessive commitment to one's professional life with the cost being failed family relationships.

Healthy families develop a sense of trust. In healthy families, husbands and wives trust each other deeply. Children are gradually given more opportunity to learn trust. The family does not break trust for the amusement of others, which means that they do not tell secrets on each other or stories that humiliate one another. This is an expression of their caring and empathy. The family realizes that broken trust happens on occasion and can be mended. In such a family, both parents and children become trustworthy.

One reason successful parents often have unsuccessful offspring is because the parents are so busy that they can't give their children the time required to provide a trusting relationship.

Occupational or professional success may be a risk factor. Success leaves people with even less time for family. Physicians must repeatedly ask themselves if they have set reasonable priorities for their own family relationships. Only then will they keep promises for time-consuming commitments with their spouse and children. This doesn't necessarily end after the children have left the nest. My adult children in the last year let me know that I was spending too much time with my nose in a paper or journal when they were visiting. Healthy families promote high levels of both closeness and individuality. They learn that it is safe to express one's feelings openly. Note Jerry Lewis's description of fathers in healthy families:

> The fathers, all of whom were successful at work, invested much of themselves in their work. They described work satisfactions as primarily people-oriented, and many spent more than 40 hours per week on the job. As a group, however, they had a good deal of themselves left over for their wives and families. This point deserves emphasis because it is one of the clear differences between these families and families seen as less competent and faltering. This ability of the husbands to have energy and emotion available and to be significantly involved with their wives and children despite heavy investment in their work was striking.[3]

Children who learn to experience a high level of trust within the family tend to have higher levels of trusting

relationships outside the family, and as Lewis implies, an individual or family that approaches others with this basic attitude is likely to receive a friendly response from others just as the untrusting and suspicious attitude toward others can also add a self-fulfilling outcome.

Healthy families often have a shared religious core. Healthy families tend to be religious, they share a religious core or values and philosophy of life. Commenting on this, Stinnett[1] states that research over the past 40 years has shown a positive relationship of religion to marital happiness and successful family relations. He went on to say

> Of course, we know that there are persons who are not religious who have happy marriages and good family relationships. Nevertheless a positive relationship between religion and marriage happiness exists according to the research that we have had for many years. These strong families went to church together, often they participated in religious activities together; most of them, although not all of them, were members of organized churches.

These families often have a strong sense of family in which rituals and traditions abound. This encourages a sense of belonging, roots. Rituals around special religious occasions and holidays increase the sense of identity and belonging, so do special celebrations of birthdays or anniversaries. Part of this is getting together as a family. This also means that these occasions, which are partly religious and partly family, are important enough to parents that they arrange not to be on call or to say no to a particular responsibility so they can be available for such occasions.

Delores Curran[7] commented,

> Faith in some transcendent belief is obviously a significant characteristic in establishing a healthy family in the eyes of my survey respondents, who work closely with many families. Not only was "a shared religious core" chosen for the top 15, but two other traits directly related to the professed role of the institutional church were prioritized there as well: "A sense of right and wrong" and "Values service to others." Taken together these three traits directly relating to religious beliefs are found in the top dozen of 56 possibles. This is impressive enough to cause us to pause and look closely at the relationship between religious belief and family health. But we have even additional reasons to do so when we add those traits which are implicit to religious ideals and which placed very high on the list: respect, trust, responsibility, and sense of family.

Since healthy families value service to others, physicians have the potential of being good role models here, if that is what they communicate at home about their practice, and if their practice does not keep them away from family to the extent that family members only resent their service to others and perhaps even question their altruism. Altruistic families care for other people in concrete ways. This is a basic principle of most religions, the principle of AA, and of most people reaching out to their impaired colleagues. Perhaps the message for healthy families is that there appears to be truth in the dictum to "love God with all your heart, soul, and mind and your neighbour as yourself." The important addendum might be not to forget that your closest neighbors are your spouse and children.

Healthy families admit to and seek help with problems. Particularly in medical families it is important to be reminded that healthy families admit, expect, and face problems. They seek to solve problems rather than to avoid them, deny them, or hope they will go away without "our bothering" anyone or being embarrassed by any self-disclosure. Healthy families don't get locked into only one way of responding to all problems whether that one way be denial, anger, chemical dependency, overeating, violence, or withdrawal and isolation.

A Concluding Thought

No one has perfect families. I didn't come from a perfect family; I'm not the husband and father in a perfect family. I haven't used the word perfect, just HEALTHY. If some of the characteristics sounded like perfections, they have been so described only to point the right direction. When you don't know where you are going, it is impossible to get to your destination. These are some directions toward which we should be aiming if our goal is toward that ever-moving target of healthier families.

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The Pilot Impaired Physicians Epidemiologic Surveillance System (PIPESS)

KARL V. GALLEGOS MD

Over the past 15 years, the medical profession has devoted increasing attention to the identification and rehabilitation of colleagues impaired by alcoholism, drug dependence, and/or psychiatric illness. In response to the need to know more about the natural history of these impairments, to define risk factors for the disease, to develop prevention strategies, and to improve the quality of services delivered to the impaired physician, the AMA Board of Trustees is implementing a pilot multistate collaborative database on the impaired physician. The project, called the Pilot Impaired Physicians Epidemiologic Surveillance System (PIPESS), will be a computer-based system for the rapid transmission, analysis, and dissemination of data on the impaired physician.

This project has been sponsored by a grant from the American Medical Association (AMA) Education Research Foundation (ERF) and the Caduceus Foundation. **Reprints:** Karl V. Gallegos, MD, Director of Data and Statistics, Caduceus Foundation, c/o Georgia Alcohol and Drug Associates, 4015 South Cobb Dr., Suite 100, Smyrna, GA 30080.

Through AMA leadership, state medical society programs to help impaired physicians now exist in virtually every state. Program components include case-finding, intervention, treatment referral, aftercare monitoring, follow-up, and re-entry assistance. Despite the efforts of the AMA and most of the state medical societies, little is known about specific risk factors or the incidence and prevalence of the problem of physician impairment.

Keeve[1] has estimated that alcoholism and drug abuse among physicians may be as high as 10 to 15 percent and may be increasing. Brewster,[2] however, believes that extreme statements regarding the prevalence of problems with alcohol and other drugs among physicians often have been made without firm empirical support. She has concluded there is not enough information to determine if physicians are at increased risk for impairment compared to the general population. Kamerow[3] and his associates report that up to 19 percent of the US adult population suffer from alcohol abuse, other drug abuse, and mental disorders that go undiagnosed and untreated. Consequently, even if physicians are no more at risk for impairment than the general population, it is conceivable that the problem may effect as many as one in five physicians.

Key Elements of PIPESS

PIPESS is a multistate disease surveillance system designed specifically to aid the physician impaired by alcohol, drugs, and mental disorders. The goals of the project are to:

1. provide an accurate assessment of the scope of physician impairment
2. more clearly define impairment and set categorical priorities with respect to each of the major impairments affecting physicians
3. develop and implement research and control programs to reduce the incidence and prevalence of impairment
4. evaluate these programs on an ongoing basis

These goals will be accomplished by the development of a uniform data collection and analysis system that will be developed using epidemiologic surveillance techniques.

The state medical societies that have agreed to participate in the pilot phase include New Jersey, New York, Ohio, Florida, Mississippi, Tennessee, Georgia, Oklahoma, Washington, and Oregon. These states account for more than 31 percent of all US physicians. Each participating program will keep data on impaired physicians who have been helped by the program, communicate with referral and assessment sources, and follow the physician-patient in the aftercare period in order to track the physician's progress in recovery. PIPESS will aid in providing information about individual physician-patients relative to others with the same characteristics, and provide surveillance information about population trends that are occurring in the participating states. The confidentiality of each physician-patient will be maintained (by mechanisms of data security) at all times.

Need for Surveillance System

Although much work has been done to provide a better understanding of chemical dependence, little has been gained toward understanding the nature of the disease. The major methodological problems that have inhibited research progress include (1) incomplete or inadequate diagnostic criteria for choosing subjects for study (2) failure to account for treatment dropouts (3) inability to follow patients for long periods after treatment and (4) no provision to obtain multidimensional treatment outcome measures.

Doll and Hill,[4] in a ten-year prospective epidemiologic study of British physicians were able to show for the first time that there appears to be a dose, frequency, duration, causal effect for mortality in relation to smoking. They chose physicians for study for the same reasons PIPESS participants believe that the investi-

gation of impaired physicians will reveal answers to questions that have remained elusive:

1. physicians understand the need for research and frequently enjoy being part of an investigation
2. they can give a good history of their substance abuse patterns and present information about dose, frequency, and duration of drug and alcohol use
3. physicians are easy to track because of licensing requirements

Also the population has been well characterized by the AMA masterfile, thus facilitating case-control studies using the population of all U.S. physicians.

Epidemiologic surveillance is the ongoing systematic collection, analysis, and interpretation of health data essential to the planning, implementation, and evaluation of public health practice. It allows timely dissemination of these data to those who need to know. The final link in the surveillance chain is the application of these data to facilitate prevention and control. Surveillance data provide a factual basis for appropriate policy making and allocation of scarce resources. Furthermore, the findings of the surveillance process contribute to the continuous redefinition of public health priorities as past problems are resolved and new needs arise.

Role of AMA

PIPESS (approved by the AMA Board of Trustees) will be a project of the AMA Impaired Physicians Advisory Committee, with technical supervision of the project provided by a Scientific Advisory Panel. The locus of control of PIPESS will be the AMA Impaired Physicians Advisory Committee, which will be guided by the decisions of the Scientific Advisory Panel. Fiscal responsibility for the project, including fund-raising, will lie with the Caduceus Foundation.

The AMA Division of Survey and Data Resources will be asked to consult with PIPESS staff regarding variable coding, to provide appropriate technical expertise, and to allow access to the AMA Masterfile. The Masterfile is a comprehensive database on all US physicians from which case-control studies can be designed.

AMA Legal Counsel will be requested to develop contracts and/or releases for use by participating state medical societies, the Scientific Advisory Panel, and the AMA Impaired Physicians Advisory Committee with respect to data collection, dissemination, and access. Such counsel also will be sought to work out issues of professional liability and confidentiality as the project evolves.

The Scientific Advisory Panel

The Scientific Advisory Panel is composed of Impaired Physician Program Directors from the state medical societies that collaborate in PIPESS. The Committee also will include three AMA representatives and a member of the Caduceus Foundation. Consultants to the Panel will include a PIPESS staff member, a delegate from the Emory University Masters of Public Health Program, and a delegate from the Centers for Disease Control (CDC).

The Panel will be responsible for the technical aspects of the Pilot program and eventual development of the National Multistate Collaborative Database on the Impaired Physician. The Scientific Advisory Panel will advise the AMA Impaired Physicians Advisory Committee about the nature of the data to be collected, findings from the analysis of the data, confidentiality mechanisms and concerns, publication of the data, and the short- and long-term goals of the project as they evolve.

PIPESS staff will co-ordinate the mechanics of PIPESS; develop the standardized data record format; provide programming and technical assistance; and deliver documentation, education, and user services for each of the participating state medical society Impaired Physician Programs. The staff will analyze the data, generate reports for each participating state, serve as a clearing house of information to facilitate participation of other states, and alert participants when unusual findings occur. The direction and tasks pursued by the PIPESS staff will be governed by the AMA Impaired Physicians Advisory Committee with guidance from the Scientific Advisory Panel. A staff member will serve as a consultant to the Scientific Advisory Panel.

The Caduceus Foundation

The Caduceus Foundation, established in 1978, is a chartered not-for-profit organization. Located in Atlanta, Georgia, it has proximity to and rapport with the CDC, the Emory University Masters of Public Health Program, and the Georgia Institute of Technology. The Board of Directors is composed of professional, educational, and religious leaders who share a concern over the growing problems of alcoholism and drug abuse and who are committed to the development of planned approaches to the control and ultimate prevention of these major public health problems.

The Caduceus Foundation has as its primary mission, the identification, treatment, and rehabilitation of health professionals with mental and physical impairments resulting from alcoholism, drug abuse, and/or related psychiatric and emotional disorders. It also engages in research in these areas and provides professional information and education leading to the development and advancement of addictionology. The pri-

mary responsibility that the Caduceus Foundation has to PIPESS is to obtain the necessary funding and to act as the fiscal agent for the project, making reports to the funding corporations and foundations. The Caduceus Foundation also will work to recruit the personnel and consultants for PIPESS and collaborate with the AMA Impaired Physicians Advisory Committee and the Scientific Advisory Panel to achieve the goals of the PIPESS project.

Conclusion

In the last five years, several state medical societies have selected full-time Impaired Physician Program Directors who function to identify, intervene upon, and refer for assessment and treatment physicians who are impaired. After treatment, these Directors follow-up with the physician during their recovery. To reduce the bias that exists when treatment centers perform outcome studies, directors of these programs need to evaluate the effectiveness of the therapeutic interventions they recommend to their physician-patients.

With the development of a uniform mechanism of data collection, standardized definitions and variables for study, and the development of a collaborative process of investigating physician impairment, much can be gained toward understanding the nature of specific impairments, their treatment, and recovery. It is anticipated that PIPESS will allow participants to refine the process of aftercare monitoring and surveillance of recovery and to improve the process of early identification and intervention. Information gained will be useful in the development of prevention strategies for the profession and for specific high-risk specialties. As many of the technical aspects of the project are refined, other state medical society impaired physician programs will be asked to join the project. This will provide the study with greater numbers so that precision estimates about specific risk factors can be obtained.

Secondary gains include revised curriculum for the education of health professionals and new perspectives or recommendations to industry and the general population about treatment of these impairments. Finally a clearinghouse for this information must be established for the protection of our profession and ultimately of our society.

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UK, Ireland, Australia[2]	ranitidine 150 mg h.s.	8%‡	14%‡	23%‡	243
	cimetidine 400 mg h.s.	21%	34%	37%	241

*p=0.02
†p=0.01
‡p≤0.004
%=life-table estimates
All patients were permitted prn antacids for relief of pain.

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BRIEF SUMMARY OF PRODUCT INFORMATION

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2. **Maintenance therapy** for duodenal ulcer patients at reduced dosage after healing of acute ulcers.
3. The treatment of **pathological hypersecretory conditions** (eg, Zollinger-Ellison syndrome and systemic mastocytosis).
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5. Treatment of **gastroesophageal reflux disease (GERD).** Symptomatic relief commonly occurs within one or two weeks after starting therapy and is maintained throughout a six-week course of therapy.

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CONTRAINDICATIONS: ZANTAC® is contraindicated for patients known to have hypersensitivity to the drug.

PRECAUTIONS: Symptomatic response to ZANTAC® therapy does not preclude the presence of gastric malignancy.

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False-positive tests for urine protein with Multistix® may occur during ZANTAC therapy, and therefore testing with sulfosalicylic acid is recommended.

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Lack of experience to date precludes recommending ZANTAC for use in children or pregnant patients. Since ZANTAC is secreted in human milk, caution should be exercised when administered to a nursing mother.

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In normal volunteers, SGPT values were increased to at least twice the pretreatment levels in 6 of 12 subjects receiving 100 mg qid IV for seven days, and in 4 of 24 subjects receiving 50 mg qid for five days. With oral administration there have been occasional reports of reversible hepatitis, hepatocellular or hepatocanalicular or mixed, with or without jaundice.

There have been rare reports of reversible leukopenia, granulocytopenia, thrombocytopenia, and pancytopenia.

Although controlled studies have shown no antiandrogenic activity, occasional cases of gynecomastia, impotence, and loss of libido have been reported in male patients receiving ZANTAC, but the incidence did not differ from that in the general population.

Incidents of rash, including rare cases suggestive of mild erythema multiforme, and, rarely, alopecia, have been reported, as well as rare cases of hypersensitivity reactions (eg, bronchospasm, fever, rash, eosinophilia) and small increases in serum creatinine.

OVERDOSAGE: Information concerning possible overdosage and its treatment appears in the full prescribing information.

DOSAGE AND ADMINISTRATION. Active Duodenal Ulcer: The current recommended adult oral dosage is 150 mg twice daily. An alternate dosage of 300 mg once daily at bedtime can be used for patients in whom dosing convenience is important. The advantages of one treatment regimen compared to the other in a particular patient population have yet to be demonstrated.

Maintenance Therapy: The current recommended adult oral dosage is 150 mg at bedtime.

Pathological Hypersecretory Conditions (such as Zollinger-Ellison Syndrome): The current recommended adult oral dosage is 150 mg twice a day. In some patients it may be necessary to administer ZANTAC 150-mg doses more frequently. Doses should be adjusted to individual patient needs, and should continue as long as clinically indicated. Doses up to 6 g/day have been employed in patients with severe disease.

Benign Gastric Ulcer: The current recommended adult oral dosage is 150 mg twice a day.

GERD: The current recommended adult oral dosage is 150 mg twice a day.

Dosage Adjustment for Patients with Impaired Renal Function: On the basis of experience with a group of subjects with severely impaired renal function treated with ZANTAC, the recommended dosage in patients with a creatinine clearance less than 50 ml/min is 150 mg every 24 hours. Should the patient's condition require, the frequency of dosing may be increased to every 12 hours or even further with caution. Hemodialysis reduces the level of circulating ranitidine. Ideally, the dosage schedule should be adjusted so that the timing of a scheduled dose coincides with the end of hemodialysis.

HOW SUPPLIED: ZANTAC® 300 Tablets (ranitidine hydrochloride equivalent to 300 mg of ranitidine) are yellow, capsule-shaped tablets embossed with "ZANTAC 300" on one side and "Glaxo" on the other. They are available in bottles of 30 (NDC 0173-0393-40) and unit dose packs of 100 tablets (NDC 0173-0393-47).

ZANTAC® 150 Tablets (ranitidine hydrochloride equivalent to 150 mg of ranitidine) are white tablets embossed with "ZANTAC 150" on one side and "Glaxo" on the other. They are available in bottles of 60 tablets (NDC 0173-0344-42) and unit dose packs of 100 tablets (NDC 0173-0344-47).

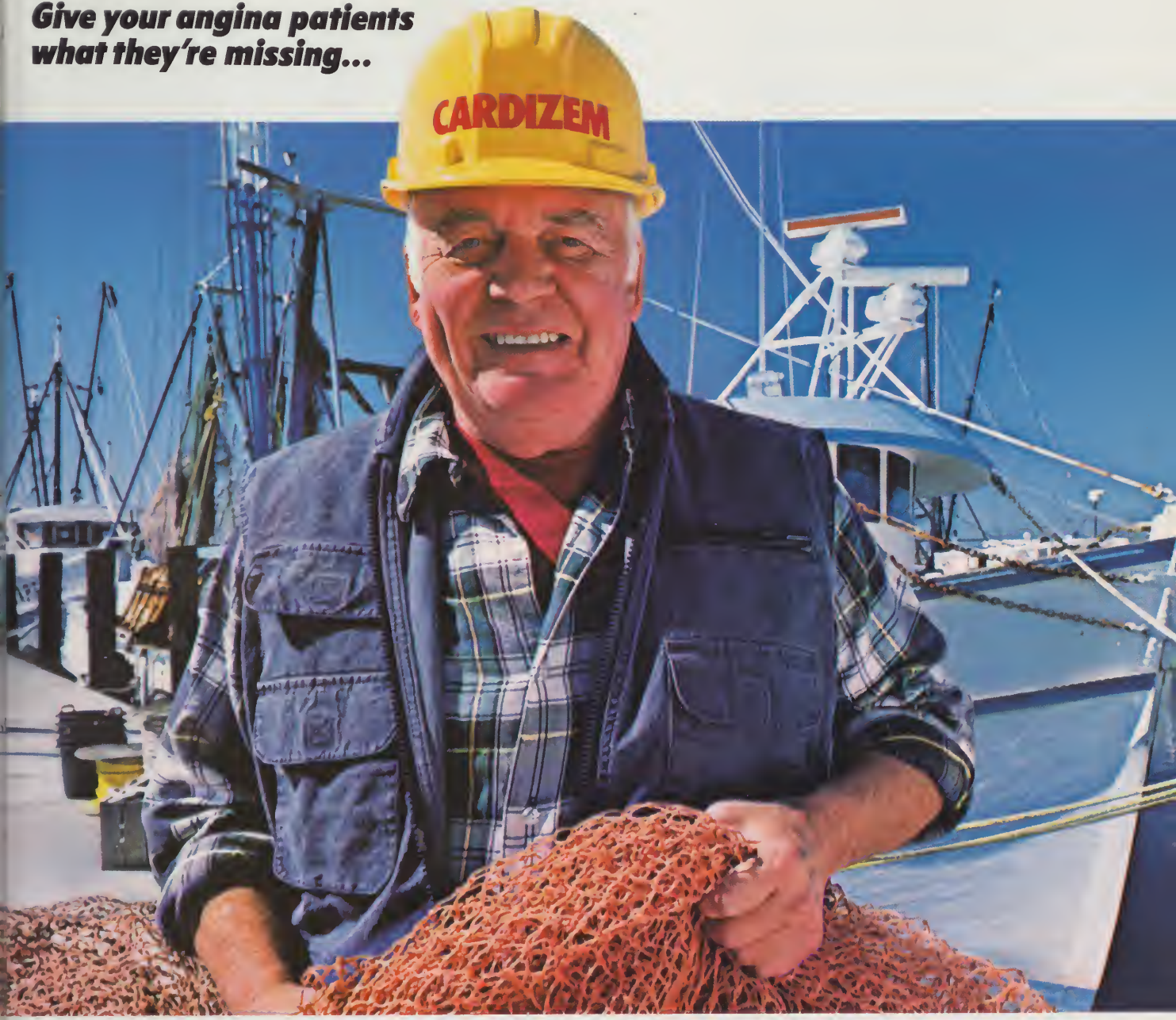
Store between 15° and 30°C (59° and 86°F) in a dry place. Protect from light. Replace cap securely after each opening.

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Give your angina patients what they're missing...



CARDIZEM®: FEW SIDE EFFECTS

diltiazem HCl/Marion

- ***Antianginal action includes dilatation of coronary arteries, a decrease in vascular resistance/afterload, and a reduction in heart rate***
- ***Proven efficacy when used alone in angina[1]***
- ***Compatible with other antianginals[2,3*]***
- ***A safe choice for angina patients with coexisting hypertension, asthma, COPD, or PVD[4,5]***

***See Warnings and Precautions.**

Please see brief summary of prescribing information on the next page.



CARDIZEM® FEW SIDE EFFECTS IN ANTIANGINAL THERAPY

diltiazem HCl/Marion

60 mg tid or qid

Brief Summary
Professional Use Information

CARDIZEM®
(diltiazem HCl) 30 mg and 60 mg Tablets

CONTRAINDICATIONS
CARDIZEM is contraindicated in (1) patients with sick sinus syndrome except in the presence of a functioning ventricular pacemaker, (2) patients with second- or third-degree AV block except in the presence of a functioning ventricular pacemaker, and (3) patients with hypotension (less than 90 mm Hg systolic).

WARNINGS

1. ***Cardiac Conduction.*** *CARDIZEM prolongs AV node refractory periods without significantly prolonging sinus node recovery time, except in patients with sick sinus syndrome. This effect may rarely result in abnormally slow heart rates (particularly in patients with sick sinus syndrome) or second- or third-degree AV block (six of 1,243 patients for 0.48%). Concomitant use of diltiazem with beta-blockers or digitalis may result in additive effects on cardiac conduction. A patient with Prinzmetal's angina developed periods of asystole (2 to 5 seconds) after a single dose of 60 mg of diltiazem.*
2. ***Congestive Heart Failure.*** *Although diltiazem has a negative inotropic effect in isolated animal tissue preparations, hemodynamic studies in humans with normal ventricular function have not shown a reduction in cardiac index nor consistent negative effects on contractility (dp/dt).*
   Experience with the use of CARDIZEM alone or in combination with beta-blockers in patients with impaired ventricular function is very limited. Caution should be exercised when using the drug in such patients.
3. ***Hypotension.*** *Decreases in blood pressure associated with CARDIZEM therapy may occasionally result in symptomatic hypotension.*
4. ***Acute Hepatic Injury.*** *In rare instances, significant elevations in enzymes such as alkaline phosphatase, CPK, LDH, SGOT, SGPT, and other symptoms consistent with acute hepatic injury have been noted. These reactions have been reversible upon discontinuation of drug therapy. The relationship to CARDIZEM is uncertain in most cases, but probable in some. (See PRECAUTIONS.)*

PRECAUTIONS
General. *CARDIZEM (diltiazem hydrochloride) is extensively metabolized by the liver and excreted by the kidneys and in bile. As with any new drug given over prolonged periods, laboratory parameters should be monitored at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic function. In subacute and chronic dog and rat studies designed to produce toxicity, high doses of diltiazem were associated with hepatic damage. In special subacute hepatic studies, oral doses of 125 mg/kg and higher in rats were associated with histological changes in the liver which were reversible when the drug was discontinued. In dogs, doses of 20 mg/kg were also associated with hepatic changes; however, these changes were reversible with continued dosing.*

Drug Interaction. *Pharmacologic studies indicate that there may be additive effects in prolonging AV conduction when using beta-blockers or digitalis concomitantly with CARDIZEM. (See WARNINGS.)*

Controlled and uncontrolled domestic studies suggest that concomitant use of CARDIZEM and beta-blockers or digitalis is usually well tolerated. Available data are not sufficient, however, to predict the effects of concomitant treatment, particularly in patients with left ventricular dysfunction or cardiac conduction abnormalities. In healthy volunteers, diltiazem has been shown to increase serum digoxin levels up to 20%.

Carcinogenesis, Mutagenesis, Impairment of Fertility. *A 24-month study in rats and a 21-month study in mice showed no evidence of carcinogenicity. There was also no mutagenic response in in vitro bacterial tests. No intrinsic effect on fertility was observed in rats.*

Pregnancy. *Category C. Reproduction studies have been conducted in mice, rats, and rabbits. Administration of doses ranging from five to ten times greater (on a mg/kg basis) than the daily recommended therapeutic dose has resulted in embryo and fetal lethality. These doses, in some studies, have been reported to cause skeletal abnormalities. In the perinatal/postnatal studies, there was some reduction in early individual pup weights and survival rates. There was an increased incidence of stillbirths at doses of 20 times the human dose or greater.*

There are no well-controlled studies in pregnant women; therefore, use CARDIZEM in pregnant women only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. *Diltiazem is excreted in human milk. One report suggests that concentrations in breast milk may approximate serum levels. If use of CARDIZEM is deemed essential, an alternative method of infant feeding should be instituted.*

Pediatric Use. *Safety and effectiveness in children have not been established.*

ADVERSE REACTIONS
Serious adverse reactions have been rare in studies carried out to date, but it should be recognized that patients with impaired ventricular function and cardiac conduction abnormalities have usually been excluded.

In domestic placebo-controlled trials, the incidence of adverse reactions reported during CARDIZEM therapy was not greater than that reported during placebo therapy.

The following represent occurrences observed in clinical studies which can be at least reasonably associated with the pharmacology of calcium influx inhibition. In many cases, the relationship to CARDIZEM has not been established. The most common occurrences as well as their frequency of presentation are: edema (2.4%), headache (2.1%), nausea (1.9%), dizziness (1.5%), rash (1.3%), asthenia (1.2%). In addition, the following events were reported infrequently (less than 1%):

Cardiovascular:	*Angina, arrhythmia, AV block (first degree), AV block (second or third degree — see conduction warning), bradycardia, congestive heart failure, flushing, hypotension, palpitations, syncope.*
Nervous System:	*Amnesia, gait abnormality, hallucinations, insomnia, nervousness, paresthesia, personality change, somnolence, tinnitus, tremor.*
Gastrointestinal:	*Anorexia, constipation, diarrhea, dysgeusia, dyspepsia, mild elevations of alkaline phosphatase, SGOT, SGPT, and LDH (see hepatic warnings), vomiting, weight increase.*
Dermatologic:	*Petechiae, pruritus, photosensitivity, urticaria.*
Other:	*Amblyopia, dyspnea, epistaxis, eye irritation, hyperglycemia, nasal congestion, nocturia, osteoarticular pain, polyuria, sexual difficulties.*

The following postmarketing events have been reported infrequently in patients receiving CARDIZEM: alopecia, gingival hyperplasia, erythema multiforme, and leukopenia. However, a definitive cause and effect between these events and CARDIZEM therapy is yet to be established. *Issued 7/86*

See complete Professional Use Information before prescribing.

References: ***1.*** *Pepine CJ, Feldman RL, Hill JA, et al: Clinical outcome after treatment of rest angina with calcium blockers: Comparative experience during the initial year of therapy with diltiazem, nifedipine, and verapamil. Am Heart J 1983; 106(6):1341-1347.* ***2.*** *Shapiro W: Calcium channel blockers: Actions on the heart and uses in ischemic heart disease. Consultant 1984;24(Dec):150-159.* ***3.*** *Johnstan DL, Lesowoy R, Human DP, et al: Clinical and hemodynamic evaluation of propranolol in combination with verapamil, nifedipine and diltiazem in exertional angina pectoris: A placebo-controlled, double-blind, randomized, crossover study. Am J Cardiol 1985;55:680-687.* ***4.*** *Cohn PF, Braunwald E: Chronic ischemic heart disease, in Braunwald E (ed): Heart Disease: A Textbook of Cardiovascular Medicine, ed 2. Philadelphia, WB Saunders Co, 1984, chap 39.* ***5.*** *Schroeder JS: Calcium and beta blockers in ischemic heart disease: When to use which. Mod Med 1982;50(Sept):94-116.*

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ISOPTIN SR*
(verapamil HCl/Knoll)

240 mg scored, sustained-release tablets



JAMES B.
38, black male, heavy smoker. Prescribed a diuretic by another physician last year for hypertension.

YOUR CONCERNS
Presents with "smoker's cough." Workup reveals a BP of 150/107.

A LOGICAL CHOICE FOR CONTROL OF HIS BP
ISOPTIN* (verapamil HCl/Knoll) because...
— Black hypertensives often have low plasma renin activity and generally do not respond favorably to beta blockers.
— Beta blockers may increase the likelihood of bronchospasm.

ALICE W.
65, diabetic, overweight. Her BP has elevated to 190/98.

YOUR CONCERNS
She's on daily insulin.

A LOGICAL CHOICE FOR CONTROL OF HER BP
ISOPTIN* (verapamil HCl/Knoll) because...
— Unlike most beta blockers and diuretics, ISOPTIN has no adverse effects on serum glucose levels.
— Unlike most beta blockers, ISOPTIN does not mask the symptoms of hypoglycemia.





THOMAS G.
70, asthmatic. In the past, BP adequately controlled with 25 mg hydrochlorothiazide daily.

YOUR CONCERNS
Today patient presents with symptoms of gout. Workup reveals high uric acid level, low serum potassium, and BP elevated to 180/98.

A LOGICAL CHOICE FOR CONTROL OF HIS BP
ISOPTIN* (verapamil HCl/Knoll) because...
— Unlike diuretics, ISOPTIN will not decrease serum potassium levels or elevate uric acid levels.
— Unlike beta blockers, ISOPTIN can be used safely in asthma and COPD patients.

JOHN K.
42, Annual physical uncovered diastolic BP of 102... confirmed on three successive office visits. Unresponsive to nonpharmacologic intervention.

YOUR CONCERNS
Salesman, spends many hours of his working day in car... total cholesterol level 300, HDL 35.

A LOGICAL CHOICE FOR CONTROL OF HIS BP
ISOPTIN* (verapamil HCl/Knoll) because...
— Unlike diuretics, ISOPTIN does not cause urinary urgency.
— Unlike either beta blockers or diuretics, ISOPTIN will not adversely affect his already seriously compromised lipid profile.
— Unlike with propranolol, fatigue and impotence are rarely reported.



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In mild to moderate hypertension
THE FIRST ONCE DAILY
CALCIUM CHANNEL BLOCKER

Brief Summary

ISOPTIN® SR
(verapamil HCl/Knoll)
240 mg scored, sustained-release tablets

CONTRAINDICATIONS: 1) Severe left ventricular dysfunction (see WARNINGS), 2) Hypotension (less than 90 mmHg systolic pressure) or cardiogenic shock, 3) Sick sinus syndrome or 2nd or 3rd degree AV block (except in patients with a functioning artificial ventricular pacemaker).

WARNINGS: Heart Failure: ISOPTIN should be avoided in patients with severe left ventricular dysfunction (see DRUG INTERACTIONS). Patients with milder ventricular dysfunction should, if possible, be controlled before verapamil treatment. Hypotension: ISOPTIN (verapamil HCl) may produce occasional symptomatic hypotension. Elevated Liver Enzymes: Elevations of transaminases with and without concomitant elevations in alkaline phosphatase and bilirubin have been reported. Periodic monitoring of liver function in patients receiving verapamil is therefore prudent. Accessory Bypass Tract (Wolff-Parkinson-White): Patients with paroxysmal and/or chronic atrial flutter or atrial fibrillation and a coexisting accessory AV pathway have developed increased antegrade conduction across the accessory pathway producing a very rapid ventricular response or ventricular fibrillation after receiving intravenous verapamil. While this has not been reported with oral verapamil, it should be considered a potential risk. Treatment is usually D.C.-cardioversion. Atrioventricular Block: The effect of verapamil on AV conduction and the SA node may cause asymptomatic 1st degree AV block and transient bradycardia. Higher degrees of AV block, while infrequent (0.8%), may require a reduction in dosage or, in rare instances, discontinuation of verapamil HCl. Patients with Hypertrophic Cardiomyopathy (IHSS): Although verapamil has been used in the therapy of patients with IHSS, severe cardiovascular decompensation and death have been noted in this patient population.

PRECAUTIONS: Impaired Hepatic or Renal Function: Verapamil is highly metabolized by the liver with about 70% of an administered dose excreted in the urine. In patients with impaired hepatic or renal function verapamil should be administered cautiously and the patients monitored for abnormal prolongation of the PR interval or other signs of excessive pharmacological effects (see OVERDOSAGE).

Drug Interactions: Beta Blockers: Concomitant use of ISOPTIN and oral beta-adrenergic blocking agents may be beneficial in certain patients with chronic stable angina or hypertension, but available information is not sufficient to predict with confidence the effects of concurrent treatment in patients with left ventricular dysfunction or cardiac conduction abnormalities. Digitalis: Clinical use of verapamil in digitalized patients has shown the combination to be well tolerated if digoxin doses are properly adjusted. However, chronic verapamil treatment increases serum digoxin levels by 50 to 75% during the first week of therapy and this can result in digitalis toxicity. Upon discontinuation of ISOPTIN (verapamil HCl), the patient should be reassessed to avoid underdigitalization. Antihypertensive Agents: Verapamil administered concomitantly with oral antihypertensive agents (e.g., vasodilators, angiotensin-converting enzyme inhibitors, diuretics, beta blockers, prazosin) will usually have an additive effect on lowering blood pressure. Patients receiving these combinations should be appropriately monitored. Disopyramide: Disopyramide should not be administered within 48 hours before or 24 hours after verapamil administration. Quinidine: In patients with hypertrophic cardiomyopathy (IHSS), concomitant use of verapamil and quinidine resulted in significant hypotension. There has been a report of increased quinidine levels during verapamil therapy. Nitrates: The pharmacologic profile of verapamil and nitrates as well as clinical experience suggest beneficial interactions. Cimetidine: Two clinical trials have shown a lack of significant verapamil interaction with cimetidine. A third study showed cimetidine reduced verapamil clearance and increased elimination to 1/2. Anesthetic Agents: Verapamil may potentiate the activity of neuromuscular blocking agents and inhalation anesthetics. Carbamazepine: Verapamil may increase carbamazepine concentrations during combined therapy. Rifampin: Therapy with rifampin may markedly reduce oral verapamil bioavailability. Lithium: Verapamil may lower lithium levels in patient on chronic oral lithium therapy. Carcinogenesis, Mutagenesis, Impairment of Fertility: There was no evidence of a carcinogenic potential of verapamil administered to rats for two years. Verapamil was not mutagenic in the Ames test. Studies in female rats did not show impaired fertility. Effects on male fertility have not been determined. Pregnancy (Category C): There are no adequate and well-controlled studies in pregnant women. ISOPTIN crosses the placental barrier and can be detected in umbilical vein blood at delivery. This drug should be used during pregnancy, labor, and delivery, only if clearly needed. Nursing Mothers: ISOPTIN is excreted in human milk, therefore, nursing should be discontinued while verapamil is administered. Pediatric Use: Safety and efficacy of ISOPTIN in children below the age of 18 years have not been established.

ADVERSE REACTIONS: Constipation 8.4%, dizziness 3.5%, nausea 2.7%, hypotension 2.5%, edema 2.1%, headache 1.9%, CHF/pulmonary edema 1.8%, fatigue 1.7%, bradycardia 1.4%, 3° AV block 0.8%, flushing 0.1%, elevated liver enzymes (see WARNINGS). The following reactions, reported in less than 1.0% of patients, occurred under conditions (open trials, marketing experience) where a causal relationship is uncertain; they are mentioned to alert the physician to a possible relationship: angina pectoris, arthralgia and rash, AV block, blurred vision, cerebrovascular accident, chest pain, claudication, confusion, diarrhea, dry mouth, dyspnea, ecchymosis or bruising, equilibrium disorders, exanthema, gastrointestinal distress, gingival hyperplasia, gynecomastia, hair loss, hyperkeratosis, impotence, increased urination, insomnia, macules, muscle cramps, myocardial infarction, palpitations, paresthesia, psychotic symptoms, purpura (vasculitis), shakiness, somnolence, spotty menstruation, sweating, syncope, urticaria. Treatment of Acute Cardiovascular Adverse Reactions: Whenever severe hypotension or complete AV block occur following oral administration of verapamil, the appropriate emergency measures should be applied immediately, e.g., intravenously administered isoproterenol HCl, levarterenol bitartrate, atropine (all in the usual doses), or calcium gluconate (10% solution). If further support is necessary, inotropic agents (dopamine or dobutamine) may be administered. Actual treatment and dosage should depend on the severity and the clinical situation and the judgment and experience of the treating physician.

OVERDOSAGE: Treatment of overdosage should be supportive. Beta-adrenergic stimulation or parenteral administration of calcium solutions may increase calcium ion flux across the slow channel, and have been used effectively in treatment of deliberate overdosage with verapamil. Clinically significant hypotensive reactions or fixed high degree AV block should be treated with vasopressor agents or cardiac pacing, respectively. Asystole should be handled by the usual measures including cardiopulmonary resuscitation.

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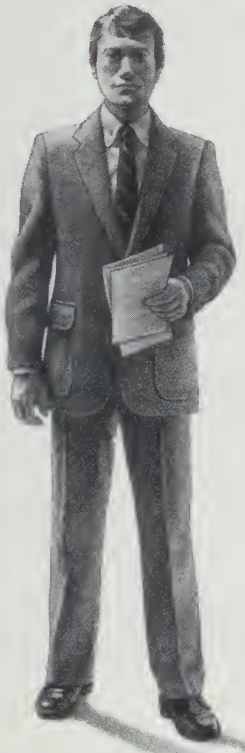
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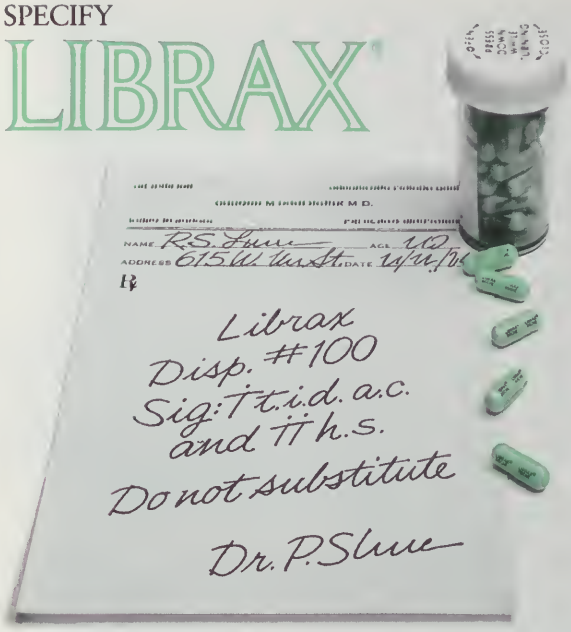
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CME Courses: For each course additional information may be obtained by contacting Program of Continuing Education, University of Maryland School of Medicine, Room 300, MSTF, 10 South Pine St., Baltimore, MD 21201 (301-528-3956).

Mar 26–27 Third National Traumatic Brain Injury Symposium, sponsored by the Speech-Communication Disorders Program, MIEMSS, University of Maryland Medical System. Info: R. Schwartz, 301-528-6101.

Apr 3–4 Symposium on Urologic Cancer, Omni International Hotel, Baltimore. Fee: $175; 11.5 AMA Cat I credits.

May 8–9 Current Practical Concepts in Endocrinology and Metabolism—1987, Omni International Hotel, Baltimore. Fee: $125; 10.5 AMA Cat I credits.

June 4–6 Annual OB/GYN Symposium, Sheraton Fontainebleau Inn and Spa, Ocean City. Fee TBA; 12 AMA Cat I & ACOG credits.

June 12 Topics In Ophthalmologic Surgery, Columbia Inn, Columbia. Fee and credits TBA.

June 21–26 13th Annual Family Medicine Review Course, Carousel Hotel, Ocean City. Fee: $375, credits TBA.

June 25–27 Dermatology Days, Carousel Hotel, Ocean City. Fee: $230 before Jun 3; $250 thereafter; 12.75 AMA Cat I credits.

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Miscellaneous Meetings

Mar 26 Hypertensive Emergencies, Grand Rounds, Shady Grove Adventist Hospital, 9901 Medical Center Dr., Rockville, MD 20850.

Mar 26 Review of the Genetic Influence on the Rheumatic Diseases, Maryland Society for the Rheumatic Diseases. Meeting at the Johns Hopkins Club. Info reservations: K. Krug, 301-366-0923.

Mar 28 MAFP Mini Conference—Cardiovascular Update for Family Physicians, Tidewater Inn East. Info: John B. Umhau, Jr., MD, 1204 Maryland Ave., Baltimore, MD 21201 (301-659-0640).

Apr 3–5 Ophthalmologic Plastic Surgery, Orbital Disease, and Neuro-ophthalmology, Medical College of Virginia CME Activity, Williamsburg Hospitality House. Fee $315. Info: K. Parrott, 804-786-0494.

Apr 6–8 Newborn Screening for Sickle Cell Disease and other Hemoglobinopathies, NIH Consensus Development Conference, Warren Grant Magnuson Clinical Center, Bethesda. Regis: N. Cowan, Prospect Assoc., 1801 Rockville Pike, Ste 500, Rockville, MD 20853 (301-486-6555).

Apr 9–11 Current Concepts in Vascular Surgery, Adam's Mark Hotel, Philadelphia, PA. Info: F. Zelle, Hahnemann University, Broad & Vine, MS 623, Philadelphia, PA 19102 (215-448-8263).

Apr 9–12 Annual Meeting, The Virginia Society of Otolaryngology-HNS, Tides Inn, Irvington, VA. Info: D. Strawderman, 4205 Dover Rd., Richmond, VA 23221 (804-353-2721).

Apr 10–12 Fifth Annual MCV Symposium: New Trends in Anesthesia, Medical College of Virginia CME Activity. Williamsburg Hilton. Fee: $275. Info: K. Martin, 804-786-0494.

Apr 10–12 Twenty-second Annual Pediatric Springfest, Medical College of Virginia CME Activity, Williamsburg Hospitality House. Fee: $250. Info: K. Martin, 804-786-0494.

Apr 23–25 Twenty-third Annual Postgraduate Course in Radiology: The Chest, Medical College of Virginia CME Activity, Richmond Marriott. Fee: $325. Info: K. Parrott, 804-786-0494.

Apr 24–26 Ninth Annual Conference on Emergency Medicine for the Primary Care Physician, Medical College of Virginia CME Activity, Fort Magruder Inn and Conference Center. Fee: $295. Info: K. Martin, 804-786-0494.

Apr 24–26 Seventh Annual Clinical Concerns in Primary Care: Office Cardiology, Medical College of Virginia CME Activity; Williamsburg Hospitality House: Fee: $295. Info: K. Martin, 804-786-0494.

Apr 25–26 AMA Conference: DNA Probes in the Practice of Medicine. Info: R.M. Evans, Office of Biotechnology, AMA, 535 N. Dearborn, Chicago, IL 60610 (312-645-4567).

May 8–10 Sixth Annual MCV Cardiology Conference, Medical College of Virginia CME Activity, Williamsburg Hospitality House. Fee: $325. Info: K. Martin, 804-786-0494.

May 13–17 MAFP Annual Meeting and Scientific Sessions, Sheraton Fountainebleau Inn & Spa, Ocean City. Up to 30.5 AMA Cat I credits and up to 30.5 AAFP prescribed credits. Info: R. Bonsack MD, 301-659-0640.

May 14–17 Annual Meeting, Virginia Society of Ophthalmology, Sheraton Tysons Corner. Info: D. Strawderman, 4205 Dover Rd., Richmond, VA 23221 (804-353-2721).

May 18–19 Fourteenth Annual Hans Berger

Day and EEG Symposium, Medical College of Virginia CME Activity, Baruch Auditorium, Egyptian Bldg., Medical College of Virginia Campus, Richmond, VA. Fee: $250. Info: K. Martin, 804-786-8494.

May 21 Update of Epidemiological Studies in Autoimmune Diseases, Maryland Society for the Rheumatic Diseases. Meeting at the Johns Hopkins Club. Info and reservations: K. Krug, 301-366-0923.

May 23–25 Gynecologic Urology and Pelvic Surgery, Medical College of Virginia CME Activity, Williamsburg Hospitality House. Fee: $260. Info: K. Martin, 804-786-0494.

June 3–7 Eleventh Annual Postgraduate Course on Rehabilitation of the Brain-Injured Adult and Child, Medical College of Virginia CME Activity, Williamsburg Hilton. Fee: $285. Info: K. Martin, 804-786-0494.

Jun 15–17 Management of Clinically Localized Prostate Cancer, NIH Consensus Development Conference, Warren Grant Magnuson Clinical Center, Bethesda. Info: N. Cowan, Prospect Assoc., 1801 Rockville Pike, Ste 500, Rockville, MD 20852 (301-468-6555).

Jul 17–19 Practical Internal Medicine: Selected Topics for the Internist, Medical College of Virginia CME Activity, Cavalier Resort, Virginia Beach, VA. Fee: $295. Info: K. Martin, 804-786-0494.

Jul 31–Aug 2 Ninth Annual Pediatric Primary Care Conference: Pediatrics at the Beach, Medical College of Virginia CME Activity, Cavalier Resort, Virginia Beach, VA. Fee: $275. Info: K. Martin, 804-786-0494.

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The Johns Hopkins Medical Institutions

All courses at the Turner Auditorium Building unless otherwise indicated. Sponsored Continued Education Activities for 1986–87. Info: Office of Continuing Education, 720 Rutland Ave., Turner Auditorium, Baltimore, MD 21205 (301-955-5880).

Mar 23–24 Non-Occupational Exposure to Asbestos in Schools and Other Buildings: Risk Assessment and Management. Fee: $350, Johns Hopkins Health Associates. $275; 12.5 AMA Cat I credits, 1:25 CEU, 2 ABIH. Info: J. Corn, 301-955-2609.

Mar 30–Apr 1 Tutorials in Laser Angioplasty and Interventional Radiology. Fee: $400 physicians, $200 residents, nurses, technicians; 25 AMA Cat I credits; 24 ECE credits by ASRT. Info: C. Kearney, 301-955-3168.

Apr 2–3 Thirteenth Annual Symposium on Diagnosis and Treatment of Neoplastic Disorders—Management of Cancer in Women. Fee: $250, $90 physicians-in-training (with verifying letter); 14 AMA Cat I Credits. Info: 301-955-6046.

Apr 3–4 Brain and Heart. Fee: $50; AMA and other appropriate credit will be awarded. Info: 301-955-6046.

Apr 6–11 Pediatric Trends 1987. Fee: $500, residents and fellows, $350; 45 AMA Cat I and 45 PREP American Academy of Pediatrics credits. Info: C. Sentman, 301-955-6085 or E.M. Sills MD, Park 207, Johns Hopkins Hospital, 600 N. Wolfe St., Baltimore, MD 21205.

Apr 8–10 Topics in Ambulatory Medicine III. Fee: $325, $165 for residents and fellows; 61.5 AMA Cat I credits, 16.5 prescribed hours AAFP. Info: 301-955-6085.

Apr 11 Current Concepts in Thyroid Disease. Fee: $125; 8 AMA Cat I credits. Info: D. Heydinger, 301-955-6046.

Apr 25 Fourth Annual Houston Everett Memorial Course in OB/GYN Urology. Fee: $90 physicians, $75 residents & fellows (with letter verifying status); 9 AMA Cat I credits. Info: 301-955-6046.

Apr 30 DRADA/Johns Hopkins Symposium on Major Affective Disorders. Fee: $15; appropriate credits applied for. Info: 301-955-6085.

May 22 Seventeenth Anniversary Meeting of the Retinal Vascular Center—Clinical Trials and the Practice of Ophthalmology. Fee: $190, residents and fellows $100. Info: D. Heydinger 301-955-6046.

July 13–17 Control of Biohazards in the Research Laboratory. Info: F.S. Tepper 301-955-5918 or J. Corn 301-955-2609.

Johns Hopkins Medical Grand Rounds: audiocassettes, slides, and booklet. 30 topics and 40 AMA Cat I credits/year. Contact 301-955-3988, Office of Continuing Education, 720 Rutland Ave., Baltimore, MD 21205.

Ophthalmic Electrophysiology Technician Training Course (on-going 1-week course by appointment), The Wilmer Eye Institute, Baltimore. Info: C.M. Kearney.

The Department of Radiology and Radiological Science offers several courses in abdominal and obstetrical ultrasound: Courses scheduled 1/12/87-12/7/87. Info: J. Mosmiller 301-955-8450.

Basic Practicum, May 11–15, Nov 16–20. Fee: $460; 40 AMA Cat I credits.

Advanced Obstetrics & Gynecology May 8–10. Fee: $325; 24 AMA Cat I credits.

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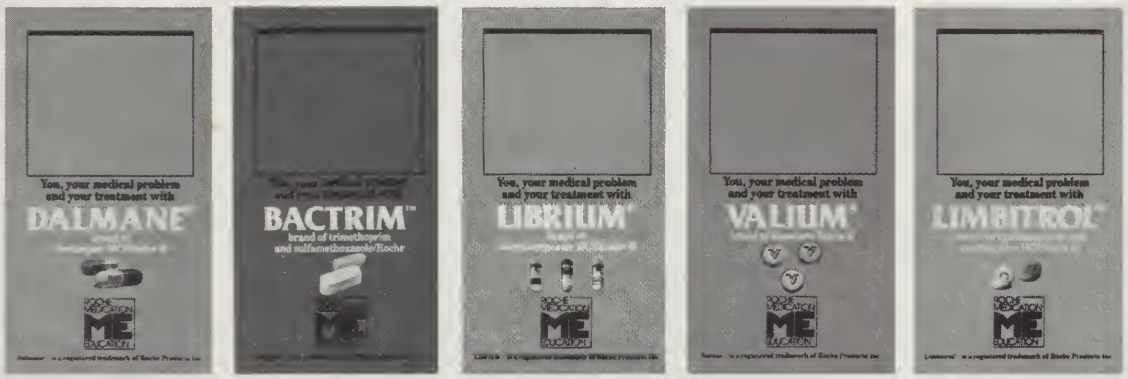
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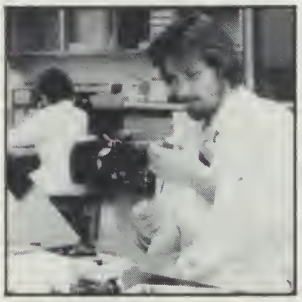
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On the cover: a reminder of Med-Chi's Annual Meeting at the end of the month. Beginning on page 298 is an article featuring some of the speakers during the three-day program.

The views in this publication are those of the authors and do not necessarily reflect the opinion of the Medical and Chirurgical Faculty of the State of Maryland.

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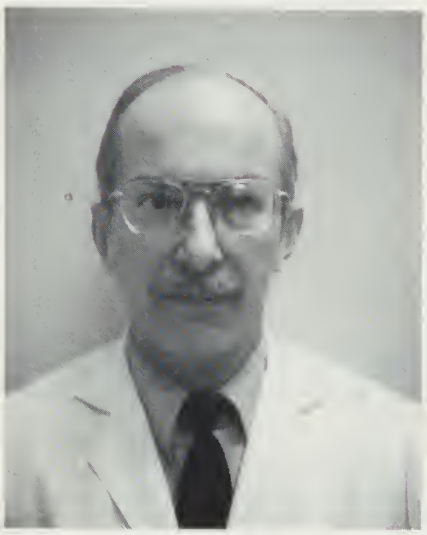
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New Dimensions in Medicine: Featured Speakers



Francis G. LaPiana MD

Francis G. LaPiana MD, FACS, Professor of Surgery (Ophthalmology), at the Uniformed Services University of the Health Sciences, will address the Maryland Society of Eye Physicians and Surgeons, at its presentation during the Annual Meeting of the Medical and Chirurgical Faculty of Maryland. On Wednesday, April 29, from 4:00 to 5:30 p.m., he will speak on **Prevention of Eye Injuries.**

A 1962 graduate of the George Washington University School of Medicine, he has been on active military duty since 1961. He completed his internship and ophthalmology residency at Walter Reed Army Medical Center and served in a number of military installations throughout the world before becoming Professor of Surgery at the Uniformed Services University of the Health Sciences. He became a Diplomate of the American Board of Ophthalmology in 1971.

Pursuing his interest in eye trauma, Dr. LaPiana has published numerous articles on ophthalmology, as well as those dealing with microsurgery, plastic and reconstructive surgery, history of medicine, trauma, and head-and-neck surgery. As a recognized expert in the area of eye injuries, he has been a frequent guest speaker at meetings of the American Academy of Ophthalmology and other specialty societies, universities, and hospitals. **This session will be of interest to all primary care physicians.**



Frank E. Young MD, PhD

Frank E. Young MD, PhD, Commissioner of the Food and Drug Administration, will address the Prayer Breakfast audience on Thursday, April 30 at 7:15 a.m. on **Emerging Issues in Modern Medicine.**

Educated at the Medical Center of the State University of New York (MD) and Case Western Reserve University (PhD), he served his internship and residency in pathology at the University Hospitals in Cleveland. He was a faculty member at Case Western Reserve University and at the University of California at San Diego; was Chairman of the Department of Microbiology at the University of Rochester; and was appointed Dean of the School of Medicine and Dentistry and Director of the Medical Center of the University of Rochester, and Vice-President for Health Affairs.

As Commissioner of the Food and Drug Administration, his responsibilities have brought him in close contact with health leaders throughout the world. He has received numerous honors in his career, including the Edward Mott Moore Award for Outstanding Physician from Monroe County Medical Society, and honorary degrees from a number of colleges and universities. An expert in the field of microbiology, he has been asked to serve on important advisory committees for the National Institutes of Health and the American Cancer Society.

He brings years of experience and knowledge in his **message to all physicians.** The Prayer Breakfast is cosponsored by the Committee on Medicine and Religion.



Ronald M. Lauer MD

Ronald M. Lauer MD is an internationally recognized pediatric cardiologist, lecturer, and author of numerous journal articles, books, and tapes on pediatric cardiology, coronary risk factors in

childhood, and blood pressure control in childhood. A number of his publications have been developed from the Muscatine Study: a study of families in Muscatine, Iowa that he has followed since 1970 with respect to cardiac risk factors.

Presently a Professor of Pediatrics and the Director of the Division of Pediatric Cardiology at the University of Iowa, Dr. Lauer did his pediatric residency in several hospitals in Canada, England, and New York. He also served fellowships at the Childrens Hospital, Buffalo, NY; the Mayo Clinic; and the Hospital for Sick Children in Toronto. Prior to becoming Professor of Pediatrics at the University of Iowa in 1968, he held academic positions at the University of Pittsburgh and the University of Kansas. A Diplomate of the American Board of Pediatrics, he is also Board Certified by the Canadian Board of Pediatrics, and the Sub-Board of Cardiology, American Board of Pediatrics. In demand as a committee member, he has served on many committees for the American Heart Association, the American Academy of Pediatrics, and the National Institutes of Health, among others.

Over the years, a number of federal and private grants have allowed him to carry on his research.

This presentation will be of particular value to family physicians, pediatricians, and nutritionists.

Dr. Lauer's talk, **Coronary Risk Factors in Children,** will be presented on Thursday, April 30, during the session "Detection of Coronary Risk Factors in High Risk Families," cosponsored by the American Heart Association, Maryland Affiliate, from 8:45 a.m. to 12:15 p.m.



Ernest K. Manders MD

The John Staige Davis Society of Plastic Surgeons of Maryland has invited **Ernest K. Manders MD,** Associate Professor of Surgery and Chief, Division of Plastic Surgery at the Milton S. Hershey Medical Center, Pennsylvania State University, to be its guest speaker at the 189th Annual Meeting. The plastic surgery session will be held on Thursday, April 30 from 10:45 a.m. to 12:15 p.m. Dr. Manders will speak on **Soft Tissue Expansion: Inside Out.**

A graduate of Harvard Medical School, he served his general surgery and plastic surgery residencies at the University of Michigan Medical Center, finishing as Administrative Chief Resident in 1979. His curriculum vitae details his vast experience in soft tissue expansion techniques. Highly regarded as a teacher and lecturer, Dr. Manders has been invited to speak throughout the world, as well as to his own peers. He recently taught an advanced course in "refinements in soft tissue expansion" at the 1986 Annual Meeting of the American Society of Plastic and Reconstructive Surgeons. Among his many honors and awards are visiting professorships in South Africa and Brazil. He was named Attending of the Year for Excellence in Clinical Teaching from the Class of 1985, the Pennsylvania State University in Hershey, PA.

The results of his work have been presented extensively in medical journals, books, videotapes, and exhibits. He is the holder of several patents on tissue expanders and is recognized by his colleagues as one of the leaders in the ongoing research and application of this technique.

His topic will be of interest to not only plastic surgeons but also to neurosurgeons, general and urological surgeons, as well as to gastroenterologists.



John G. McAfee MD

New Developments in Clinical Nuclear Medicine will be delivered on Thursday, April 30, 1987, from 4:00 - 5:30 p.m., by **John G. McAfee MD.** Dr. McAfee's talk is cosponsored by the

Maryland Society of Nuclear Medicine.

Dr. McAfee is Professor and Director, Division of Radiological Science, Department of Radiology, Upstate Medical Center, State University of New York, a position he has held since September 1978. The years from 1953 were spent in Baltimore at the Johns Hopkins University, culminating in his position as Head of the Division of Nuclear Medicine from 1958 to 1965. Prior to becoming Professor and Director of the Division of Radiological Science at Upstate Medical Center in 1978, Dr. McAfee served as Professor and Chairman, Department of Radiology and as Professor and Director, Division of Nuclear Medicine at the same university. From January to June 1975, he was Visiting Professor on Sabbatical leave at the Cyclotron Unit, Hammersmith Hospital in London. A diligent researcher and teacher, he has received a number of research grants, both private and federal, and the results of this work have been published extensively in medical journals and books.

One of the many honors he has received during his career was the establishment in 1978 of the Annual John G. McAfee Lectureship in Nuclear Medicine at the State University of New York.

Dr. McAfee has designed his talk to be of interest to the surgeon and the internist as well as to the specialist in nuclear medicine.

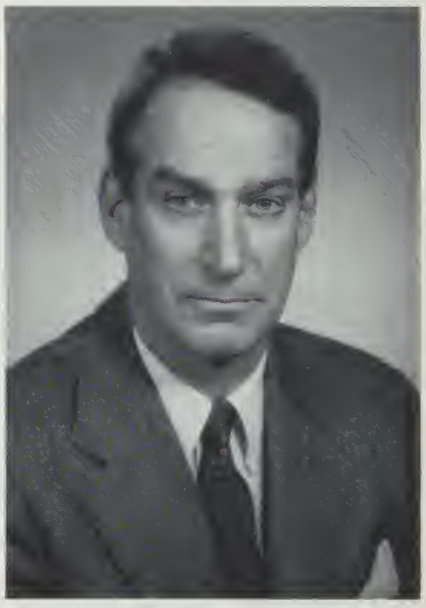


Herbert Y. Reynolds MD

Professor of Medicine and Head of the Pulmonary Section at Yale University School of Medicine, **Herbert Y. Reynolds MD** will be one of the featured speakers at the Annual Meeting. Dr. Reynolds will address **Host Defense Impairments that May Lead to Respiratory Infections,** on Friday, May 1 from 8:45 a.m. to 12:15 p.m., during the session cosponsored by the Maryland Thoracic Society and the Maryland Asthma and Allergy Society.

Dr. Reynolds graduated from the University of Virginia Medical School in 1965 and served his internship and a fellowship in medicine at The New York Hospital, Cornell Medical Center. Beginning in 1967, he held positions in the Laboratory of Clinical Investigation, National Institute of Allergy and Infectious Diseases (NIAID), National Institutes of Health, beginning as a Clinical Associate and becoming the Chief Clinical Associate the following year under the direction of Dr. Sheldon M. Wolff. Before serving as Senior Investigator in the Laboratory of Clinical Investigation (NIAID), Dr. Reynolds spent one year at the University of Washington Hospital in Seattle as Chief Resident and Instructor in Medicine. During his Tenure as Senior Investigator, he was named Head of the Bacterial Diseases Section.

Dr. Reynolds accepted the position as Head of the Pulmonary Section of the Department of Internal Medicine at Yale University School of Medicine in 1976, first as an associate professor and in 1979 as a professor of internal medicine, a position he still holds. Among other appointments, he serves on the Board of Scientific Counselors for the National Heart, Lung, and Blood Institute, NIH, and as an Examiner for the American Board of Internal Medicine (Pulmonary Subspecialty). His articles on lung immunity and host defenses, one of his five major research interests, have appeared in major medical journals. Dr. Reynolds is Board Certified by the American Board of Internal Medicine and by the American Board of Allergy and Immunology.



Albert L. Sheffer MD

Exercise Induced Anaphylaxis and Related Syndromes will be discussed by **Albert L.**

Sheffer MD, Boston, on Friday, May 1. Dr. Sheffer will be one of two speakers on a program cosponsored by the Maryland Asthma and Allergy Society and the Maryland Thoracic Society, beginning at 8:45 a.m. **This session is aimed at all physicians regardless of specialty because of the widespread interest in exercise.**

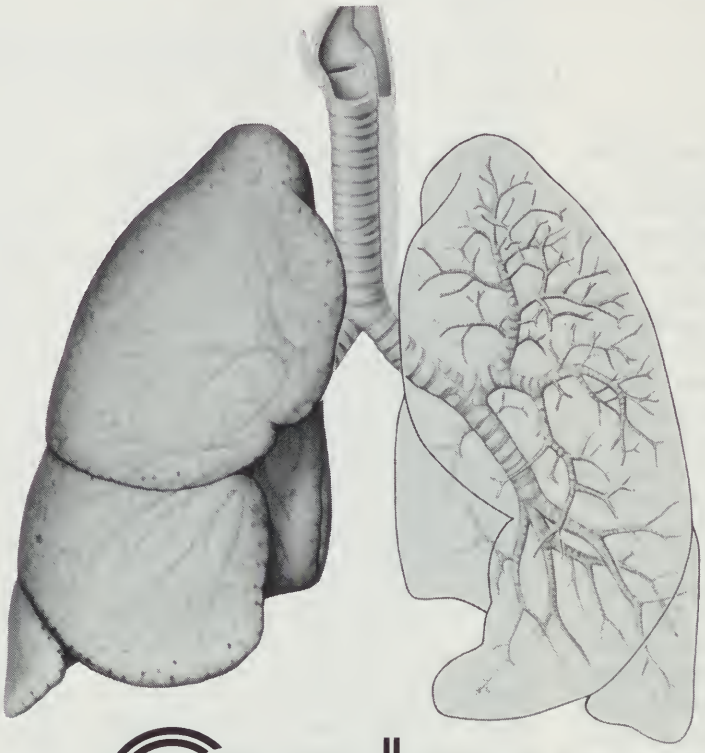
A Clinical Professor of Medicine at the Harvard Medical School, Dr. Sheffer is President of the American Academy of Allergy and Immunology. His internship and residencies were spent in Pennsylvania at the Graduate Hospital of the University of Pennsylvania, the Henry Phipps Institute, and the Temple University Medical Center. His articles on anaphylaxis (as well as those on his other major research interests of angioedema and urticaria and of bronchial asthma) have been published widely in medical journals. He has done research fellowships with the American Thoracic Society, the Heart Association of Southeastern Pennsylvania, NIAID at Rockefeller University in New York with Dr. Merrill W. Chase, as well as at Lahey Clinic.

One of the recognized experts in the field of allergy and immunology, he has been very active over the years in organized medicine, serving in many positions for the American Academy of Allergy, as well as on U.S. Pharmacopeia committees, and the Food and Drug Administration. His consultant posts and directorships have been in many leading hospitals throughout the northeastern United States over the last 25 years.

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- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients.

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- Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.
- Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1%.

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APRIL 1987

HUMAN IMMUNODEFICIENCY VIRUS INFECTION IN TRANSFUSION RECIPIENTS AND THEIR FAMILY MEMBERS

The Centers for Disease Control (CDC) has received a report of human immunodeficiency virus (HIV) infection among multiply-transfused leukemia patients in New York City. In addition, there have been several reports that persons with transfusion-associated HIV infection have transmitted the virus to their sexual partners and newborn children. All infected transfusion recipients described in these reports had received blood or blood components before routine screening of donated blood for HIV antibody was begun in the spring of 1985.

MULTIPLY-TRANSFUSED LEUKEMIA PATIENTS:

During the past year, four long-term leukemia survivors at Memorial Sloan-Kettering Cancer Center in New York City developed unexplained fever, weight loss, diarrhea, or lymphadenopathy. They subsequently had positive serological tests for HIV antibody. A retrospective study of other multiply-transfused leukemia patients was conducted to determine how many had been infected with HIV. Informed consent was obtained from all living patients. Positive enzyme immunoassay (EIA) tests were confirmed by Western blot assay. Patients known to have other risk factors for HIV infection were excluded from the study.

Sera were located for 182 deceased and obtained from 22 surviving leukemia patients treated during the years 1978-1986. Sixteen of these transfusion recipients were seropositive for HIV antibody (See Table 1 on next page). They had received a mean of 27 units of packed red blood cells (range 2-56) and 137 units of platelets (range 10-483). Forty-five percent of these 204 patients had acute myelogenous leukemia; 20% had acute lymphocytic leukemia; 13%, chronic myelogenous leukemia; 4%, chronic lymphocytic leukemia; 6%, myelodysplastic syndromes; and 12%, other or unclassified leukemias. There was no correlation

between type of leukemia and the presence of HIV antibody. An additional 23 newly diagnosed, untreated, and untransfused leukemia patients were tested and all were seronegative.

TABLE 1. HIV serology results in leukemia patients, by year of specimen collection--Memorial Sloan-Kettering Cancer Center, New York City

Years	Total number of patients tested	Number with positive test	Estimated* risk per component
1978-80	86 (55M,31F)†	0 (0%)	0.00%
1981-83	77 (39M,38F)	9 (12%) (6M,3F)	0.07%
1984-86§	41 (21M,20F)	7 (17%) (2M,5F)	0.10%
Total	**204 (115M,89F)**	**16 (8%) (8M,8F)**	**0.05%**

*Estimated risk based on an average of 164 components per recipient.

†M=males; F=females.

§These patients were treated before screening of blood products began in March 1985; 22 long-term survivors, four of whom were seropositive, are included.

ADDITIONAL CASE REPORTS FROM OTHER AREAS

Case 1: An elderly man with no known risk for AIDS received multiple units of blood in early 1982, including one from a donor who subsequently tested positive for HIV antibody. The recipient developed Pneumocystis carinii pneumonia (PCP) in 1983 and died in 1984. His wife, who did not have any other risk factors for AIDS, had had vaginal intercourse with him until he became ill in late 1982. In late 1984, her HIV antibody test was positive and she was diagnosed as having a type of lymphoma indicative of AIDS.

Case 2: A pregnant woman with no other risk factors for AIDS received four units of blood in 1978, including one from a donor who later tested positive for HIV antibody. A son, born in 1980, had failure to thrive beginning at 13 months of age and died with PCP in 1986. The woman, her son, her husband, and the child born shortly after the transfusion all tested positive for HIV antibody.

Editorial Note: At present, prevention of HIV infection and AIDS is dependent upon deferral of blood or plasma donation by persons at increased risk for AIDS, testing of donated blood and plasma for HIV antibody, heat treatment of clotting factor concentrates, avoidance of unprotected sexual contact and needle sharing by persons infected with HIV, and prevention of perinatal transmission by infected women. Counseling and HIV antibody testing have been recommended for persons at risk for infection (including homosexual/bisexual men, intravenous drug abusers, hemophilia patients, prostitutes, and persons who have had sexual contact with members of these groups). Routine counseling and antibody testing have not been recommended for blood transfusion recipients because, in general, their risk for infection is extremely low. However, as illustrated by this report and others,

some multiply-transfused persons may be at a higher risk for HIV infection. In addition, some persons with transfusion-associated HIV infection have transmitted the virus to their sexual partners and, perinatally, to their infant children.

Although the number of infected transfusion recipients in the United States is unknown, it can be approximated using estimates of the prevalence of infection in donors, the efficiency of transmission, and the number of units transfused per year. In 1985, 0.04% of donations were positive for HIV antibody to Western blot assay. If 0.04% had been the seroprevalence among donors in the year prior to screening, if all seropositive units had transmitted infection, and if each seropositive unit had gone to a different recipient, then 7,200 of the approximately 18 million components transfused in 1984, (American Blood Commission, unpublished data) might have transmitted infection. If 60% of these recipients have died from their underlying disease, then approximately 2,900 living recipients who acquired a transfusion-associated HIV infection in 1984 would remain. Most of these would be asymptomatic. The number of infected donors was probably lower in earlier years. Mathematical projections from reported tranfusion-associated AIDS cases estimate that approximately 12,000 people now living in the United States acquired a transfusion-associated HIV infection between 1978 and 1984.

Blood banking organizations in the United States have begun "look-back" programs to identify previous recipients of blood from donors who tested positive for HIV antibody after screening began. In one region, 70% of recipients identified through such a program had HIV antibody. However, look-back programs cannot identify all infected transfusion recipients because many infected donors may have refrained from donating or become too ill to continue to donate after HIV serologic testing of donors began.

The risk of HIV transmission by transfusion was low, even before screening, and has been virtually eliminated by the routine screening of donated blood and plasma. However, since HIV-infected persons are at risk for developing AIDS or related conditions themselves and may transmit infection to others, physicians should consider offering HIV antibody testing to some patients who received transfusions between 1978 and late spring of 1985. This consideration should be based on the likelihood of infection in a recipient and the likelihood of transmission from that recipient. The risk of infection is greatest if the recipient received large numbers of transfusions and if the blood was collected during the few years before screening in an area with a high incidence of AIDS. (The leukemia patients in this report received many units of blood and blood components in an area with a higher prevalence of HIV than most parts of the United States, so their seropositivity rate is higher than would

be expected in other patients. Conversely, persons who received a small number of units in a low prevalence area would have an extremely low risk of HIV infection.) Testing is particularly important if the patient is sexually active. Since the overall prevalence of infection in transfusion recipients is expected to be low, the positive predictive value of EIA screening tests for HIV antibody will be much lower than that seen when testing high-risk populations. Therefore, all transfusion recipients with a positive EIA should also have their serum tested by a second method (Western blot assay, immunofluorescence asssay) before they are informed of their test result. Seropositive persons should be evaluted for signs and symptoms of AIDS or related conditions and counseled regarding the avoidance of HIV transmission to others.

SOURCE: Centers for Disease Control, Morbidity and Mortality Weekly Report, March 20, 1987/Vol. 36/No. 10.

References are available upon request.

UNCOMMON COMMUNICABLE DISEASES: EPIDEMIOLOGY, PREVENTION AND CONTROL

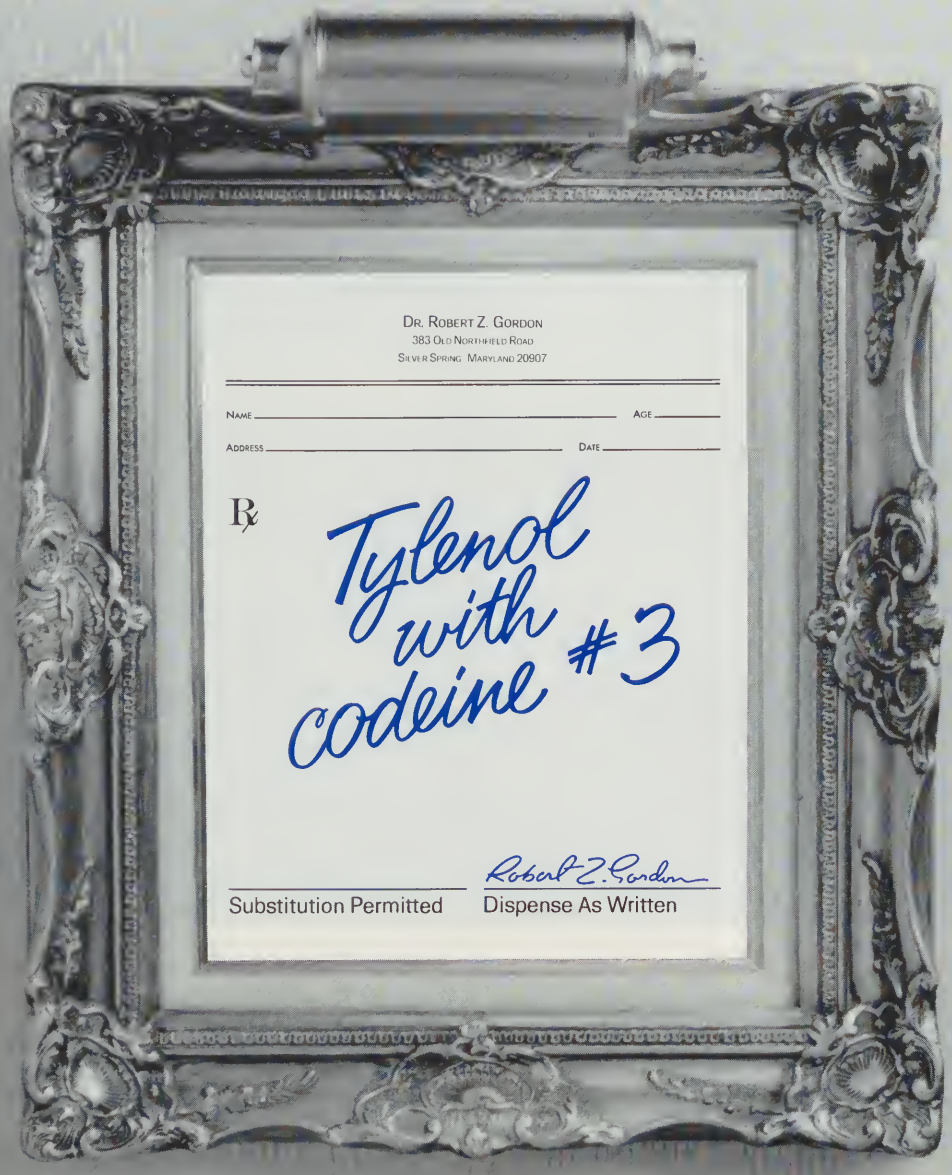
On May 26, 1987, a conference on "Uncommon Communicable Diseases" will be presented by the Center for Clinical Epidemiology, Assistant Directorate, Epidemiology and Disease Control, and co-sponsored by the Spring Grove Hospital Center, Maryland State Department of Health and Mental Hygiene. The conference will be held from 9:00 a.m. to 4:00 p.m. in the Auditorium of the Old State Roads Building, 300 West Preston Street, Baltimore, Maryland.

Additional information may be obtained by contacting Miss Patricia J. Powers at (301) 225-6681. CME's will be awarded.

Pre-registration by telephone is required due to limited seating. Registration by physicians for the conference will be taken between May 15th through May 21st **only**. No fee is required. Register by contacting Mrs. Myra Greenberg at (301) 225-6681.

MEASLES ALERT

Spring is the time of the year we can expect to see our first cases of measles. For the past three years, measles cases in college students have been reported just after the conclusion of college spring break. As such, consider seriously the possibility of measles in any of your patients, particularly of high school and college age, if they present with a rash and fever. Phone such suspect measles cases to your local Health Department immediately; do not wait until the case is confirmed.



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Executive Director's Newsletter

April 1987

LEGISLATIVE SUCCESSES

Since the printing of the last Executive Director's Newsletter, two major successes were achieved in Annapolis. First, legislation that would have established mandatory assignment for Medicare was soundly defeated. Second, after the defeat of a bill calling for mandatory offset of collateral sources, another bill, Medical Injury Awards-Modification and Remittitur (HB 1593), with a slightly different approach to the same problem was introduced and passed by the House Judiciary Committee by a vote of 13-9. By the time you read this, if all goes well, HB 1593 will have been passed by the entire House and the Senate. Medical Mutual has guaranteed that passage of this bill will limit increases in malpractice insurance rates.

DRGs for RAPs

The Faculty made an urgent appeal to Maryland's eight U.S. Representatives to co-sponsor House Concurrent Resolution 30 opposing President Reagan's proposal to modify Medicare reimbursement mechanisms for inpatient services provided by hospital-based radiologists, anesthesiologists, and pathologists (RAPs). As of April 1, 1987, Helen Bentley, Beverly Byron, Roy Dyson, and Thomas McMillen had each submitted their name for co-sponsorship. A follow-up letter has been sent to Constance Morella, Kweisi Mfume, Steny Hoyer, and Benjamin Cardin reemphasizing the need for their support. Physicians are encouraged to contact these four representatives and to convince them to endorse this resolution.

FEE GUIDE UPDATE

On March 18, 1987, Med-Chi staff met with representatives from the Attorney General's Office and discussed our concerns about the accuracy and usefulness of the publication, Doctor's Fees in Maryland. The Attorney General's Office now has 1986 Medicare data and representatives at the meeting indicated that the original 1985 data containing serious errors will not be distributed any further.

We informed the Attorney General that even if the 1986 data is statistically proved to be accurate, problems will remain. Analyzed with the Flesch's Indices for Readability Testing, the instruction booklet, How to Read the Price Guide, scored "fairly difficult" and "mildly interesting." It is written at the level of Harpers and Atlantic. We also pointed out that Medicare data on physicians' fees is not a reliable indicator of other physicians' fees. The title Doctor's Fees in Maryland does not clarify to the public that the guide only contains Medicare fees.

At this time, we strongly believe that this publication would be a disservice to the public, and we will continue dialogue with the Attorney General to assure that if a guide is ultimately distributed to the public, it will be valid and useful.

PRESCRIPTIONS FOR CONTROLLED DANGEROUS SUBSTANCES

The Board of Medical Examiners has advised that the enactment of HB 1476 during last year's session of the General Assembly requires physicians to use a separate prescription form for each controlled dangerous substance prescribed. Controlled and non-controlled substances may not be listed on the same prescription form. Lastly, prescriptions for controlled dangerous substances may not be written on preprinted prescription forms stating the name, quantity, or strength of the controlled dangerous substance.

ANNUAL MEETING

The 189th Annual Meeting will be held, Wednesday-Friday, April 29-May 1, 1987, at the Omni International Hotel in downtown Baltimore. A variety of scientific programs will be presented by Maryland specialty societies. The Keynote Speaker for the meeting will be George Will, a noted columnist, author, ABC news commentator, and political analyst. Mr. Will is to speak at the Plenary Session scheduled on WEDNESDAY, APRIL 29 from 2:00 - 3:30 p.m. A complimentary lunch will be offered to all member physicians on Wednesday in the Exhibit Hall. Plan to arrive at 12:00 on Wednesday, enjoy the complimentary lunch, VISIT THE EXHIBITS, and stay for George Will's insightful look into medicine as it relates to the federal government and to our theme, New Dimensions in Medicine.

A variety of activities are taking place during the three days of the meeting: business sessions, MMPAC Cabaret (featuring the Capitol Steps, a hilarious group of political satirists), Lunch and Learn, Prayer Breakfast, Auxiliary activities, scientific programs, and exhibits. Complimentary parking is offered on a first-come, first-served basis in several garages in the area. An Annual Meeting flyer is in the mail to provide you with information on parking and other important activities at the meeting. Fifteen Category I CME Credits are offered.

CPT-1987

Physicians' Current Procedural Terminology (CPT-1987) is available through Med-Chi. These codes are used by many private insurance Medicaid carriers as well as by the federal government for Medicare Part B. Price is $30 per copy. To order the CPT-1987, send a check made payable to the "Med-Chi Library" Attn: CPT order.

IMAGE CAMPAIGN

On April 1, 1987, Med-Chi launched a one-month pilot "Image Enhancing" Campaign in Washington, Allegany and Garrett counties. The campaign includes both billboard and radio spot announcements designed to enhance the image of physicians. When the campaign ends, physicians in those counties will complete a survey that will measure the effectiveness of the campaign. If it is successful in Western Maryland, it will be released statewide.

Angelo J. Troisi
Executive Director

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Articles in *MMJ* in May

In-Flight Medical Emergencies—W. Robert Lange MD

Editorial—More on In-Flight Emergencies—James G. Zimmerly MD

Reevaluation of External Cephalic Version—Valerie A. Sorkin-Wells MD, W. Scott Taylor MD, and Phillip J. Goldstein MD

Excessive Protein Intake: A Common Cause of False-Positive Neonatal Screening for Tyrosinemia—Dennis W. Bartholomew MD, Mark Batshaw MD, Michele D. Wilson MD, and Gregg Semenza MD

Hospital Efficiency in Early Coronary Care—Raymond D. Bahr MD

AMA Interim Meeting, December 7–10, 1986
Las Vegas, NV

We have abstracted some of the key issues from the "Report of the Faculty's Delegation to the AMA." The full report will be published in the August 1987 issue of *MMJ*.

• **Physician DRG: Medicare Reimbursement** AMA is vigorously opposing the OMB's proposal to roll physician reimbursement into Medicare payments to hospitals. While mobilizing resources to impress upon the President and Congress the danger this proposal represents and the threat it poses to Americans, AMA stated, "The proposal is unrealistic, unreasonable, unwise, and unhealthy for our senior citizens and other beneficiaries of the Medicare program. . . . [it] represents [another] step on the road to rationing care for Medicare beneficiaries."

• **New AMA Strategic Plan** To strengthen public and professional confidence in the AMA, delegates adopted a new plan and strategies to allow the Association to meet future challenges effectively. As adopted by the House, the key objective is to contribute to the professional and personal development of members and to the betterment of the health of the public by developing and distributing information; by advocating health-related rights, responsibilities, and issues; and by representing the profession as a whole where the image, expertise, and national scope of the AMA prove useful.

• **Peer Review Organizations (PROs)** Delegates considered a comprehensive report and a number of resolutions on the many problems physicians are having with the federal peer review program. The House adopted the report from the Council on Medical Service that recommends the AMA develop draft federal legislation that a PRO shall not notify a beneficiary of a PRO determination that quality of services provided does not meet professionally recognized standards of health care until the physician (1) has obtained a PRO reconsideration and (2) has exhausted rights to judicial review of any adverse decisions.

The House also called on AMA to communicate with the Department of Health and Human Services a desire to seek greater PRO discretion in the determination and handling of sanctions; to undertake legal action to assure physicians are accorded due process appeal rights in the course of PRO sanction and appeal processes; as well as to urge that reconsiderations and appeals be heard before panels of physicians in active practice.

Another resolution asked the AMA to encourage Medicare patients to voice valid concerns about the PRO program to their elected federal officials and to encourage individual physicians to facilitate such patient complaints and to forward such complaints to the AMA.

• **Health Policy Agenda (HPA) for the American People** The House considered a status report on this massive project; the final report should be released in early 1987. An HPA Implementation Committee has been appointed to oversee execution of policy recommendations to be carried out primarily through coalitions formed around individual or groups of similar proposals.

• **Teen Health** Calling for a comprehensive approach to the health needs of young people, the House approved a report outlining an AMA initiative in adolescent health care. The report identified five major factors contributing to the problems of adolescents: substance abuse, sexuality/pregnancy, victimization, psychological disorders/suicide, and violent crime. A sustained commitment is needed to produce the desired improvement in adolescent health.

• **Guidelines on AIDS** The House accepted two reports on AIDS that (1) provided physicians with guidelines for responding to questions regarding AIDS and (2) opposed acts of categorical discrimination against AIDS patients, HIV positive individuals, and persons at increased risk of developing AIDS.

• • •

AMA House meetings provide a unique educational opportunity; we encourage you to attend and participate. Any member of the Association may present testimony at the Reference Committee hearings. Corridor discussions on issues provide additional opportunities to communicate your views. If you are unable to attend the meeting, you can be represented through your delegate: let your delegation know your opinions. You can prepare a resolution and request that it be submitted to the House.

Many AMA policies began with an individual physician who had a good idea and coaxed it through the democratic process.

Delegates
ALBERT M. ANTLITZ **MD, Chairman**
ROLAND T. SMOOT **MD, Vice-Chairman**
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GEORGE S. MALOUF **MD**
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MICHAEL R. DOBRIDGE **MD**

Alternates
JOHN H. HEBB **MD**
HENRY N. WAGNER, JR., **MD**
JOSEPH SNYDER **MD**
HILDA I. HOULIHAN **MD**
PHILIP SCHNEIDER **MD (Resident)**
NICHOLAS GEORGES **(Student)**

Executive Committee and Council Actions

Executive Committee—November 20, 1986

• **Adoption of Minutes** The minutes of the House of Delegates meetings of April 16 and 18, 1986 were adopted as distributed.

• **Update on Specialties Certification** The Board of Medical Examiners is developing regulations to implement the specialty identification statute and has requested the Faculty's input. The Executive Committee approved the appointment of a committee to interact with the Board on this activity.

• **Physician Defense Panels** The Committee reviewed a proposed policy on the confidentiality of panel proceedings related to peer review and decided such a policy need not be addressed at this time. Since the present policy of the Commission on Medical Discipline is to refer every Health Claims Arbitration case for investigation, HCAO cases are investigated before a panel is convened.

• **Medical Mutual** Various issues concerning the relationship between Med-Mutual and Med-Chi were discussed. A letter will be sent advising Med-Mutual of these matters the Committee wishes to discuss at the December 17 meeting with them, scheduled at Med-Mutual's invitation.

• **Medical Mutual—Martin Weintraub MD** The Committee discussed a letter from Dr. Weintraub concerning Med-Mutual's policy on issuing insurance to physicians insured through another company. Apparently, Med-Mutual refuses to issue insurance if a physician's current policy has not yet expired. This matter will be discussed on December 17.

• **Virginia Malpractice Case** Judith Wood briefed the Committee on *Boyd v. Bulala*, a case from the United States District Court for the District of Virginia in which the Virginia cap on malpractice awards was found to be unconstitutional. A motion to file as *amicus curiae* in support of the Virginia statute was adopted and forwarded to Council for approval.

• **Blue Cross/Blue Shield of Maryland** The Faculty's relationship with Blue Cross/Blue Shield of Maryland was discussed. Although recent policies have been detrimental to physicians, it would be logical to continue a reasonable working relationship with them.

Michael Murray reported that subsequent to a November 12 meeting with representatives from the Faculty, certain specialty societies, and Blue Cross/Blue Shield of Maryland executives there was an unspecified concession made regarding the recent major medical policy.

• **Update on IPA Activities** Leon E. Kassel MD, Chairman of the Task Force on IPAs, reported on the activities of the task force and presented its recommendation that $1,000 be funded to the firm of Judith Matteson, Inc. to Assist Med-Chi in organizing an IPA. The Committee approved the recommendation and referred it to Council.

• **Obstetrical Services** The Committee was briefed on the availability of obstetrical services in Maryland, particularly the Eastern Shore. Easton area obstetricians are discontinuing their practice due to increased malpractice insurance premiums. Their patients are being referred to other obstetricians in the surrounding areas who have agreed to accept them and to the Anne Arundel County Medical Society. Negotiations are planned between the obstetricians and the hospital in Easton regarding malpractice insurance.

• **Editorial Board Request** The Committee approved a request from the Editorial Board of the *Maryland Medical Journal* to fund two plaques each year for the best manuscript authored by a resident-in-training and for the best manuscript authored by a practitioner. The awards will be presented during the annual meeting of the Faculty's House of Delegates.

Council—November 20, 1986

Dr. Hiroshi Nakazawa introduced his guest, Dr. Toyokichi Ashi of the Kanagawa Prefectural Medical Association of Japan and liaison to Maryland with the Sister State Program. Dr. Ashi enlightened the members about the practice of medicine and the malpractice situation in Japan.

President Donald T. Lewers MD informed Council of the efforts under way in preparing the malpractice brochure for use in physicians' offices.

Council Chairman Michael R. Dobridge MD reviewed the restructuring of Med-Chi's organization and the recent changes that have taken place: resignations of Elza Davis and John Stierhoff and employment of Gerry Evans. Plans for the Med-Chi Service Corporation will come to the Council for review before implementation.

Membership will be kept informed concerning deduction of membership dues from income taxes in light of the recent tax law.

• **Adoption of Minutes** The following minutes were adopted:

Executive Committee Planning Session, September 23, 1986
Council, September 27, 1986
Executive Committee Conference Call, October 14, 1986
Executive Committee, October 23, 1986

• **1987 Council Meeting Dates** Council meeting dates for 1987 were approved as follows:

Thursday, January 29, 4 p.m.
Thursday, March 19, 4 p.m.
Wednesday, April 29, 8:30 a.m.—Annual Meeting
Friday, May 1 (immed. following House Session)—Annual Meeting
Thursday, May 21, 4 p.m.
Saturday, September 26, 10 a.m.—Semiannual Meeting
Thursday, November 19, 4 p.m.

• **Emeritus Membership** The following members were approved for Emeritus Membership at the request of the component society indicated:

Anne Arundel County	Robert A. Riley MD, Annapolis

Baltimore City	Edmund G. Beacham MD, Baltimore
	W. Alfred Gakenheimer MD, Baltimore
	Allen Kleiman MD, Baltimore
	Edward S. Klohr, Jr., MD, Baltimore
	William W. Magruder MD, Baltimore
	John E. Miller MD, Baltimore
	Aubrey D. Richardson MD, Baltimore
Baltimore County	John M. Rehberger MD, Baltimore
Montgomery County	John G. Fawcett MD, Boyds
	Joel B. Hoberman MD, Bethesda
	Maurice J. Leon MD, Bethesda
	Raymond A. Osbourn MD, Rockville (Affiliate)
	James T. Quattlebaum MD, Gibson Island
Prince George's County	Charles M. Weber MD, Riverdale
Somerset County	C. G. Rawley MD, Crisfield

• **1987 Dues Waivers** The following physicians were granted dues waivers for 1987 as requested by the component society indicated:

Charles County	Vernon B. Dettor MD La Plata (medical disability)
Montgomery County	William J. Hogan MD Rockville (medical disability)

• **Committee on Professional Ethics** Council reviewed two statements from the Committee on Professional Ethics: "Referrals and Consultations" and "Laboratory Referrals." Louis Breschi MD, chairman of the committee, explained these represented old statements that had been rewritten and updated by the committee. Both were approved by Council.

• **OB Services** Joseph Jensen reported that obstetricians on the Eastern Shore, particularly in Easton, were ceasing their practice due to the increase in their malpractice insurance premiums. Patients of these physicians are being referred to obstetricians in the surrounding areas who have agreed to accept them and to the Anne Arundel County Medical Society. Meanwhile, the obstetricians are negotiating with the Easton hospital regarding their malpractice insurance.

• **Small Area Practice Variation** Dr. Kassel reported on the status of the Faculty's collaboration with the Department of Health and Mental Hygiene on a variation study involving coronary artery bypass surgery in Maryland.

• **Virginia Amicus Case** Council heard the recommendation of the Executive Committee that Med-Chi file as *amicus curiae* in the *Boyd v. Bulala* case from the United States District Court for the District of Virginia in which the Virginia cap on malpractice awards was found to be unconstitutional. Council adopted a motion to file as *amicus curiae* in support of the Virginia statute.

• **Update on IPA Task Force** Dr. Kassel updated Council on the activities of the IPA Task Force and presented the recommendation of the Executive Committee that $1,000 be funded to Judith Matteson, Inc. to assist Med-Chi in establishing an IPA. Council approved the recommendation.

• **Legislative Receptions** Angelo Troisi reminded members of the various legislative receptions being held throughout the state providing an opportunity for physicians and legislators to exchange their views on health issues.

• **Maryland Foundation for Health Care** Kennard L. Yaffe MD expressed his appreciation for the support extended to the Foundation over the past two years on the PRO contract.

Executive Committee—December 18, 1986

• **Student Residency Seminar** A contribution of $300 was approved as requested by the Medical Student Association to assist with the expense of their Fourth Annual Residency Seminar to be held January 31, 1987.

• **Physicians' Image Media Campaign** James Bell MD presented a report of the Public Relations Committee and updated the cost of this campaign to include production costs of approximately $10,000, bringing the total to an estimated $65,796.

Barbara Brotman-Kaylor, Executive Vice-President of Image Dynamics, presented her company's proposed "Physicians' Image Media Campaign."

It was noted that such a campaign is needed and the Public Relations Committee has worked very diligently on this issue; however, further clarification of the program and the budget requested was needed.

• **Amicus Brief in Virginia Statute Case** Judith Wood informed the committee that due to an omission in notification of the Virginia Attorney General as required by federal district court rules, the Boyd case has been remanded to the district court to allow the Virginia Attorney General to present arguments. The case probably will not be before an appellate court until summer of 1987. This matter was deferred until the case is heard.

• **Petition for Declaratory Ruling** The Committee approved the filing of a petition for a Declaratory Ruling from the Commission on Medical Discipline to clarify the legality of payments per patient made to physicians by mobile testing companies.

• **AMA Physicians' Survey 1987** A briefing on past Faculty participation revealed that 1985 was the last date of our participation. In March 1986, the Executive Committee suggested intervals of three years for participation in the survey. The Committee agreed the three-year interval should be upheld thereby declining to participate in the 1987 survey.

• **1987 Legislative Plan** After Gerry Evans pre-

sented the legislative plan for 1987, it was adopted unanimously.

• **Schaefer Transition Team Update** Dr. Lewers provided a variety of possibilities of potential organizational plans for the Department of Health and Mental Hygiene. Jose M. Yosuico MD reported that the Baltimore City Medical Society had sent a letter to the governor-elect noting the society's ability to provide input for any of the reorganization concepts of the Department.

• **Committee on Scientific Activity Request** The Committee approved the request of the Committee on Scientific Activity to charge an application fee to organizations applying for CME credits and Faculty cosponsorship of meetings and seminars. Component societies and Faculty Committees will be exempt from such application fees. This fee will become effective January 1, 1987.

• **Physician DRGs** The Faculty will continue to fight the physician DRGs for anesthesiologists, pathologists, and radiologists. Component societies will be asked to call the White House to express their concurrence with this action.

• **AIDS Policy** J.D. Drinkard MD requested and was granted authority to speak for the Faculty on the subject of AIDS during talk shows.

• **Commendation** Dr. Dobridge read a letter from the Knights of Columbus praising Dr. Kassel for his presentation on IPOs, PPOs, and IPAs.

Discipline Commission Actions
appear regularly in *MMJ*

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Doctor to Doctor

Doctors' Dilemmas

JULIAN JAKOBOVITS MD

Swear, fool, or starve; for the dilemma's even;
A tradesman thou! and hope to go to heaven?
John Dryden (1631–1700)
(Trans. of Persius, Satires, V. 204)

The medical practitioner has always been confronted with "dilemma's even"—or nearly even. Who among us doesn't cherish the thought of going to heaven for his or her efforts in confronting them properly?

During this century medical dilemmas have multiplied greatly. Consequently, the ethics used to help analyze and solve them have become ever more intricate and thus, we hope, sensitive to the nuances of today's complexities. For example, the AMA code of 1847 could propose that a physician should "unite condescension with authority," a quaint paternalism by today's standards. By the first part of this century medical ethics has shifted some emphasis to the problems of obligation between doctors and patients but was still often limited to clinical situations. For example, in Joseph Fletcher's *Morals and Medicine*, published in 1954, medical ethics still meant, for the most part, medical manners: deportment, guild rules, propriety. Should the doctor sit on the bed? Should he "smell" of tobacco?

The frustration with which the conscientious contemporary physician must face the medical quandaries of today is accurately reflected in one of Webster's definitions of dilemma: "An argument that offers an opponent a choice between two or more alternatives but that is equally conclusive against him no matter which alternative he chooses." An optional definition, "a choice or a situation involving choice between equally unsatisfactory alternatives," offers no comforting advantage.

Webster however does offer another meaning for dilemma, one more correctly descriptive of clinical dilemmas. "A difficult problem: a problem seemingly incapable of a satisfactory solution." The key is "seemingly." Precisely because the solutions are enigmatic, on the one hand, but are ultimately soluble, on the other, we are obliged to invest every effort in facing these challenging problems.

The contemporary physician faces a veritable kaleidoscope of predicaments and dilemmas. Medical training has taught us that to categorize and tabulate data is often the key to correct decipherment of a problem. Accordingly, the following table provides a spectrum of medical dilemmas, dividing them into two convenient general categories.

Internal Dilemmas

Diagnostic (differential diagnoses, alternatives in work-up options)
Therapeutic (surgical *vs.* medical *vs.* nothing).

External Dilemmas

Legal (advertising, consent)
Societal (criminals, drugs, AIDS, limited resources)
Global (blood transfusions, abortion, "moment of death," transplants)
Interpersonal relationships
- with patients (truth-telling, billing issues)
- with peers ("protecting the medical fraternity," fee splitting)

The first group, Internal Dilemmas, are addressed throughout every physician's training. The scientific foundations of modern medicine have spawned an enormously complex body of knowledge designed to sharpen our diagnostic capabilities and to enhance our therapeutic options. Every medical textbook, every journal, is filled with the information needed to discharge our responsibilities with diagnostic acumen and therapeutic precision. No physician would regard himself or herself, let alone be regarded, as competent without a solid foundation in these disciplines.

Furthermore, all but the most cavalier and self-reliant practitioner would readily recognize his or her limitations when faced with a difficult Internal Dilemma, turning quickly for expert subspecialist reinforcement. Such consultation never would be thought of as challenging the vaunted principle of "physician autonomy."

By contrast, physicians frequently feel threatened when an External Dilemma arises and the suggestion is made that "subspecialty" advice be sought. While it is arguable that the identification of a competent External Dilemma expert is considerably harder to make than it is of an Internal Dilemma expert, should that relieve us of endeavoring to identify such expertise? In fact, proposed legislation in the wake of *Karen Quinlan* and *Baby Doe* type cases to formalize the consultants' role in External Dilemmas has not made the acceptance of this genre any more palatable for many of us. The profession's reaction is often characterized by predictable rejection of any "outside" legislation or control.

George Bernard Shaw, writing in his "Preface on Doctors"—as an introduction to the 1906 play *The Doctor's Dilemma*—is more directly concerned with the Internal Dilemmas than the External ones. It is probably realistic to assume that medical maturity has now developed to the point where his accusations are no longer generally true. However, could these lines still have application with respect to the External Dilemmas?

This column is contributed by the Public Relations Committee of the Medical and Chirurgical Faculty of Maryland. We encourage readers to share their thoughts and experiences on the subject. Med-Chi, Public Relations, 1211 Cathedral Street, Baltimore, MD 21201; James E. Bell MD, Chairman; Bernard R. Shochet MD, Editor.

when the doctor is in the dock, or is a defendant in an action for malpractice, he has to struggle against the inevitable result of his former pretences to infinite knowledge and unerring skill. He has taught the jury and the judge, and even his own councel [*sic*], to believe that every doctor can, with a glance at the tongue, a touch on the pulse, and a reading of the clinical thermometer, diagnose with absolute certainty a patient's complaint.... Now all this supposed exactness and infallibility is imaginary; and to treat a doctor as if his mistakes were necessarily malicious or corrupt malpractices (an inevitable deduction from the postulate that the doctor, being omniscient, cannot make mistakes: is as unjust as to blame the nearest apothecary for not being prepared to supply you with six-penny of the elixer of life, or the nearest motor garage for not having perpetual motion on sale in gallon tins. But if the apothecaries and motor car makers habitually advertised elixer of life and perpetual motion, and succeeded in creating a strong general belief that they could provide it, they would find themselves in an awkward position if they were indicted for allowing a customer to die, or for burning a chauffer by putting petrol into his car. That is the predicament the doctor finds himself in when he has to defend himself against a charge of malpractice by a plea of ignorance and fallibility. His plea is received with flat incredulity, even from laymen who know, because he has brought the incredulity on himself.... Usually it is impossible to persuade the jury that these facts are facts. Juries seldom notice facts; and they have been taught to regard any doubts of the omniscience and omnipotence of doctors as blasphemy.

The omniscience and omnipotence of which Shaw writes is not encountered as often today as it once was. The burgeoning subspecialty community, which many now feel the need to curb, provides conclusive evidence that physicians refer numerous patients to colleagues for help with the Internal Dilemmas. This practice has become so widespread that many now mourn the passing of the age of the true generalist. Were Shaw here today he could not justly accuse most physicians of trying to "diagnose with absolute certainty." The pressure of the ever-present threat of litigation has ensured the decentralization of clinical decision making, and of its devolution onto the shoulders of as many practitioners as is reasonable. Indeed, the number of physicians involved in the care of one patient sometimes exceeds what many might deem reasonable.

However, the changing approach to the Internal Dilemmas has not been matched by a similar movement for the External Dilemmas. Here the profession as a whole is still perceived by the public at large as thinking itself infallible. Clearly the time has come when consultation with other disciplines ought not to be greeted with distrust and suspicion. Rather, such External Dilemma consultations should be incorporated into state-of-the-art medicine, paralleling the general acceptance now of consultation for difficult Internal Dilemmas. Instead, the medical community's resistance to review in matters of ethics, law, and religion—even by peers—is widespread and is symptomatic of how far it still has to go if Shaw's final advice is not to be regarded as impossible.

Make it compulsory for a doctor using a brass plate to have inscribed on it, in addition to the letters indicating his qualifications, the words "Remember that I too am mortal."

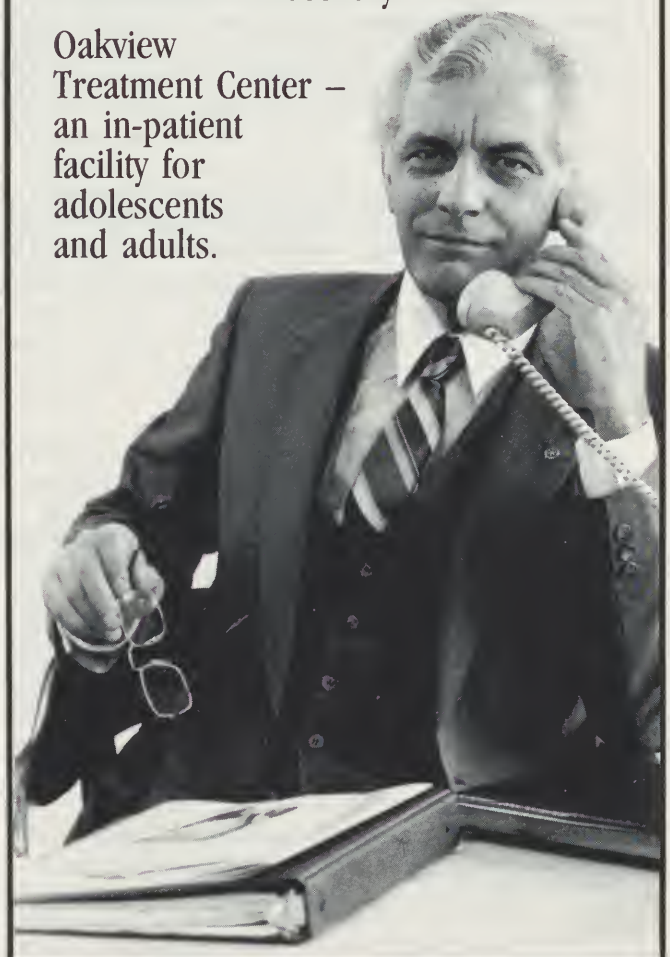
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Library Page

Med-Sig: A Computerized Bulletin Board for Maryland Physicians

What exactly is Maryland Med-Sig?

Maryland Med-Sig is an on-line computerized bulletin board (a message communications system) specifically designed for physicians and some other health professionals. It is sponsored by and operated under the auspices of the Medical and Chirurgical Faculty of Maryland.

The system consists of computer equipment located at the Medical Society's facilities in midtown Baltimore. It is able to communicate via modem and phone lines to users around the state. More distant users also can access the system via long-distance lines. WATS lines may be used in the future. Standard telephone equipment is adequate to connect with Med-Sig.

What type of material is on Med-Sig?

The bulletin board system is designed to be a clearinghouse for messages and information of specific interest to the health professional. This would include messages to and from physicians, hospitals, hospital staff libraries, state and federal health agencies, Med-Chi and its component sections, professional medical associations, and special interest medical groups.

In addition to the message portion, the uniqueness of the computer allows Med-Sig to provide a library of public domain software that may be downloaded by users for their own purposes. Many of these program applications are medical in nature. The system also supports the concept of users uploading programs to the system for others to share.

Announcements of meetings and speakers, medical society functions, events of medical interest, and hospital occurrences also appear. Special areas devoted to medical news and news of interest to computer users also are available. As an added bonus, Med-Sig has been able to obtain permission to make available to its users some proprietary medical education sources designed for computer use. Further enhancements are in the planning stage.

Why would an individual physician in practice or a hospital-based physician be interested in Med-Sig?

Not only would the physician be kept abreast of news of medical interest and be exposed to educational opportunities and medical computer subjects, but also he or she would be able to communicate with colleagues without the time and location constraints that often block easy access. "On-line" consultations and exchange of medical information and data would be readily available. Electronic mail (public or private) could speed up the acquisition of important information or data. The file/program exchange section could be of great use to a physician who uses a computer in the office or at home. Currently, more than 15 hospital medical staff libraries around the state are using Med-Sig to exchange rapidly interlibrary loans requested by their members.

The "Medic-Alert" area could warn a practitioner about a potentially dangerous drug reaction, an epidemic, or other vitally important medical news.

A section devoted to medicopolitical topics has been set aside to serve as a forum for thought and discussion.

Members often are able to exchange information concerning the use of computers to assist in their medical or business affairs. Tips between users have saved many hours of frustration and wasted time. Many members have had considerable experience with computerization. Being a computer expert is NOT a requisite; in fact, novices are encouraged to join and learn with us.

Who actually runs this program?

Med-Sig is maintained by the Maryland State Medical Society (Med-Chi), and its activities are a function of the Society. The day-to-day operations and policy suggestions are under the guidance of the Society's Committee on Computers in Medicine. Suggestions from all Med-Sig members are welcomed and encouraged. Anyone seeking to become an active participant in the activities of this committee should contact the Society.

Was the Committee on Computers in Medicine created only to run Med-Sig?

No, Med-Chi created the Committee on Computers in Medicine to deal with the impact of computer technology on health professionals and to oversee the operations of Med-Sig. The committee is charged with addressing issues such as the use of computer technology in the physician's office and the hospital from a professional as well as a business point of view. The committee is trying to assist in bridging the current gap between physicians and technology as it relates to data gathering and manipulation.

How would I register for Med-Sig?

Preregistration is necessary to maintain security, and passwords are used to log on. To register, phone or write the Medical Society's Library at 1211 Cathedral Street, Baltimore, MD 21201 (301-539-0872, ex. 345).

What equipment do I need to communicate with Med-Sig?

Almost any computer can communicate with Med-Sig including such micros as IBM and its compatibles: Apple, Atari, Commodore, CP/M machines, or Tandy. Minis and mainframes also can be set up to communicate with the system. A user must have a computer, a modem (device to interface with the phone system), an

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available but not necessarily dedicated phone line, and the proper software to operate the computer. Any user interested in specific information may call and will be referred to a member of the committee who will attempt to assist him or her.

What does it cost to use Med-Sig?

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H. GERALD OSTER **MD, Chairman**
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Review: Report of the Second Task Force on Blood Pressure Control in Children

KENNETH G. ZAHKA MD

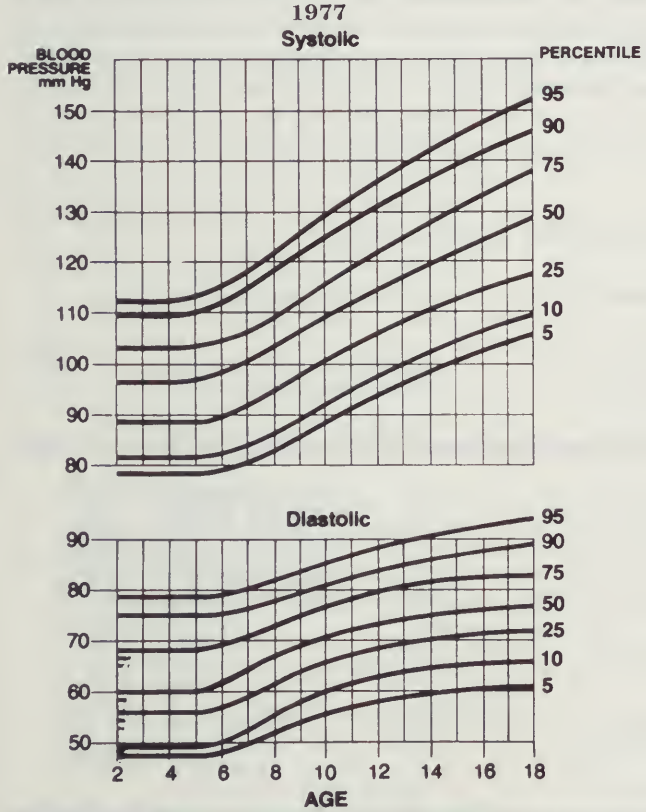
The Report of the Task Force on Blood Pressure Control in Children, first published in 1977, has been revised and updated, and expands on the original data and recommendations. It is directed to the primary care pediatrician or family practitioner as well as the pediatric subspecialist and emphasizes periodic blood pressure measurements and continued surveillance of children through adolescence.

Dr. Zahka is Assistant Professor of Pediatrics, Division of Pediatric Cardiology, Johns Hopkins University School of Medicine.

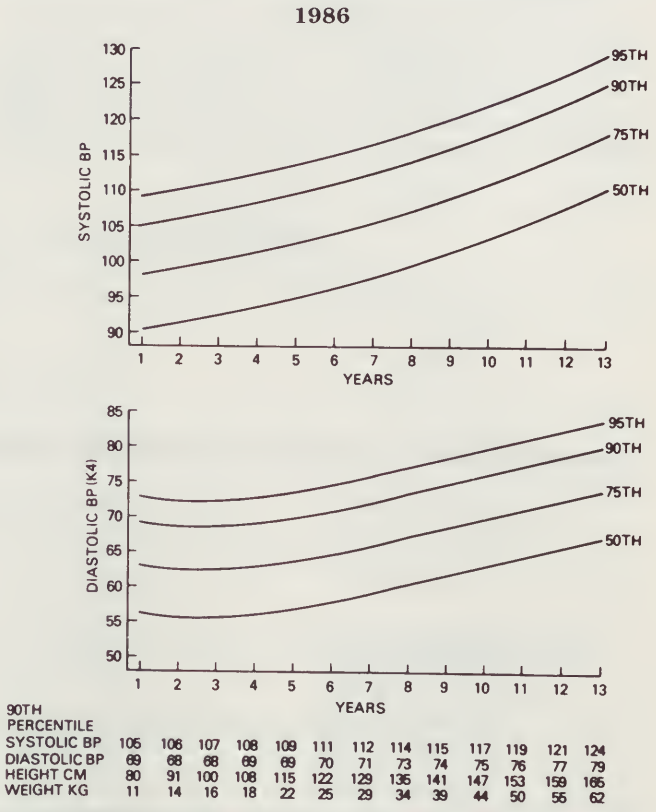
In 1977 the National Heart, Lung, and Blood Institute commissioned the first Report of the Task Force on Blood Pressure Control in Children,[1] which has had wide distribution and has become the major reference for blood pressure standards in children. In 1977 data linking cardiovascular risk with systolic and diastolic blood pressures in children were not available, and unfortunately, still are not available. However, better epidemiological data on normal blood pressure distributions throughout the pediatric age range are now available. Because of this and because of the growing concern about the possible relationship between blood pressure patterns in youth and the subsequent development of adult essential hypertension, the original Report has been revised.[2] The complete text has been published in *Pediatrics*, January 1987.

The new Report expands on the original data and recommendations, and summarizes available data from nine studies on normal blood pressure from birth to 18 years of age. Normal distributions of blood pressure are presented, not only according to age but also with reference to height and weight; this is particularly helpful when evaluating children who are tall (as opposed to obese) for their age. Curves describing the age-specific distributions of systolic and diastolic BPs for males and females are intended to replace those published in the first Report. At all ages the BPs tend to be lower than those published in 1977. For example, Figure 1 displays the 1977 percentiles for BP measure-

Figure 1. Comparison of Blood Pressure Distribution Curves for Boys, from the First and Second Task Force Reports



Percentiles of blood pressure measurement in boys ages 2 to 18 years



90TH PERCENTILE													
SYSTOLIC BP	105	106	107	108	109	111	112	114	115	117	119	121	124
DIASTOLIC BP	69	68	68	69	69	70	71	73	74	75	76	77	79
HEIGHT CM	80	91	100	108	115	122	129	135	141	147	153	159	165
WEIGHT KG	11	14	16	18	22	25	29	34	39	44	50	55	62

Age-specific percentiles of blood pressure measurements in boys ages 1 to 13 years

ment in boys ages 2 to 18 and the 1986 percentiles for boys ages 1 to 13. Note that on the abscissa of the new charts the 90th percentile for BP in mm Hg, height in cm, and weight in kg are listed for each age to facilitate taking height and weight into account when BPs exceed the 90th percentile.

Blood pressure has been defined as normal when below the 90th percentile for age, high normal when between the 90th and 95th percentile, and hypertensive when above the 95th percentile (Table 1).

Table 2 presents the classification of hypertension by age group, and Table 3 lists the dimensions of commonly available blood pressure cuffs. Specific guidelines for the technique of blood pressure measurement are discussed in the Report in detail, including recommended ages for recording the fourth or the fifth Korotkoff sounds. Special considerations for BP measurement in infants are described.

To aid the practitioner, an algorithm distinguishing between normotensive and hypertensive children has been developed (Figure 2).

The Report stresses the importance of blood pressure surveillance of children by their primary health care providers and reinforces the recommendation of the American Academy of Pediatrics for annual routine blood pressure measurements between the ages of 3 and 20 years, to be recorded on age-appropriate charts, which facilitate the routine identification of children with blood pressures above the 90th percentile. More frequent repeat measurements are recommended for children above the 90th percentile (with the exception of normally proportioned children who are tall for their age; this subset of tall but not obese children are considered normal if their blood pressure for their height is below the 90th percentile).

The Task Force provides a concise review of the pertinent historical and physical examination data that must be gathered as part of the initial evaluation of children whose blood pressures persist ≥95th percentile. If essential hypertension is suspected, based on the clinical data, the Task Force recommends a urinalysis, complete blood count, blood urea-nitrogen, creatinine, HDL-cholesterol, and calculated LDL-cholesterol. If drug therapy is being considered seriously, an echocardiogram to establish baseline left ventricular mass is justified. A further evaluation of children in whom a secondary cause is suspected is outlined. There is renewed emphasis on nonpharmacologic therapies, especially for those children who remain between the 90th and 95th percentile. Where pharmacologic therapy is indicated, a stepped-care approach is recommended, starting with either a low-dose thiazide-type diuretic *or* andrenergic inhibitor. The reader is referred to the complete text of the Report for management guidance.

Table 1. Definitions[2]

Normal blood pressure
Systolic and diastolic blood pressure less than the 90th percentile for age and sex

High normal blood pressure*
Average systolic and/or average diastolic blood pressure between the 90th and 95th percentiles for age and sex

High blood pressure
(Hypertension)
Average systolic and/or average diastolic blood pressure equal to or greater than the 95th percentile for age and sex with measurements obtained on at least three occasions

* If the blood pressure is high normal for age but can be accounted for by excess height for age or excess lean body mass for age, such children are considered to have normal blood pressure.

Table 2. Classification of Hypertension by Age Group

Age Group (years)	Significant Hypertension	Severe Hypertension
Newborn		
7 days	Systolic BP ≥ 96 mm Hg	Systolic BP ≥ 106 mm Hg
8–30 days	Systolic BP ≥ 104 mm Hg	Systolic BP ≥ 110 mm Hg
Infant (2)	Systolic BP ≥ 112 mm Hg Diastolic BP ≥ 74 mm Hg	Systolic BP ≥ 118 mm Hg Diastolic BP ≥ 82 mm Hg
Children (3–5)	Systolic BP ≥ 116 mm Hg Diastolic BP ≥ 76 mm Hg	Systolic BP ≥ 124 mm Hg Diastolic BP ≥ 84 mm Hg
Children (6–9)	Systolic BP ≥ 122 mm Hg Diastolic BP ≥ 78 mm Hg	Systolic BP ≥ 130 mm Hg Diastolic BP ≥ 86 mm Hg
Children (10–12)	Systolic BP ≥ 126 mm Hg Diastolic BP ≥ 82 mm Hg	Systolic BP ≥ 134 mm Hg Diastolic BP ≥ 90 mm Hg
Adolescents (13–15)	Systolic BP ≥ 136 mm Hg Diastolic BP ≥ 86 mm Hg	Systolic BP ≥ 144 mm Hg Diastolic BP ≥ 92 mm Hg
Adolescents (16–18)	Systolic BP ≥ 142 mm Hg Diastolic BP ≥ 92 mm Hg	Systolic BP ≥ 150 mm Hg Diastolic BP ≥ 98 mm Hg

In summary, the goal in caring for children is surveillance and possible prevention, as well as identification of fixed hypertension requiring treatment when such cases cannot be prevented. The optimal treatment for elevated blood pressure in childhood is the least amount of intervention required to achieve the blood pressure goals while maintaining a high degree of compliance. Treatment should be individualized for each patient. With the exception of severe hypertension, nonpharmacologic intervention should be introduced as the first treatment phase. Even in patients who require antihypertensive drug therapy to control blood pressure, every effort should be made effectively to achieve dietary modification, weight control, and exercise training. Finally, when hypertension is maintained under good control with drugs, consideration should be given to gradual withdrawal of drug therapy with careful monitoring of blood pressure.

Of note is the support the Task Force gives to the role of the primary care pediatrician or family practitioner in the HBP detection, evaluation, and treatment process as a part of the continuing care of the child. They recommend referral to a pediatric subspecialist only after the primary care provider has explored the possible etiologies for the high blood pressure and after initial therapies have proved ineffective.

The Report does not—and cannot, as yet—answer questions regarding the long-term cardiovascular risk of specific systolic and diastolic blood pressures and the risks and benefits of various interventions to lower blood pressure. It does, however, provide excellent data and evaluation and treatment strategies that will be valuable to clinicians caring for all ages of children.

References

1. "Report of the Task Force on Blood Pressure Control in Children." *Pediatrics* 59(5)(1977)(Supplement):797–820.
2. "Report of the Task Force on Blood Pressure Control in Children." *Pediatrics* 79(1987):1–25.

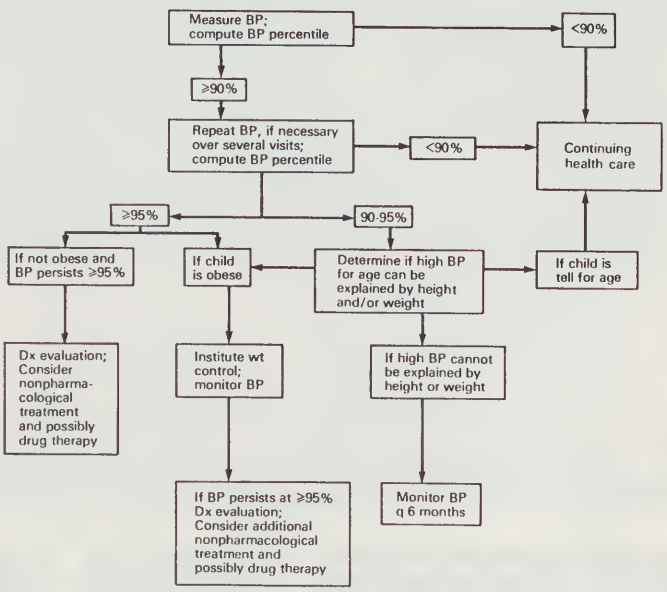
HBP Commentary is contributed by the Maryland Commission on High Blood Pressure and Related Cardiovascular Risk Factors, 201 W. Preston St., Baltimore, MD 21201 (301-225-5891). Editors: R. Patterson Russell MD, Past Chairman; Donald O. Fedder PharmBS, DrPH, Chairman; and Carol Lewis MPH, ScD, Executive Director.

Table 3. Commonly Available Blood Pressure Cuffs[2]

Cuff Name*	Bladder Width (cm)	Bladder Length (cm)
Newborn	2.5–4.0	5–9
Infant	4.0–6.0	11.5–18
Child	7.5–9.0	17–19
Adult	11.5–13.0	22–26
Large arm	14–15	30.5–33
Thigh	18–19	36–38

* Cuff name does not guarantee that the cuff will be appropriate size for a child within that age range.

Figure 2. Algorithm for Identifying Children with High Blood Pressure[2]



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Include in the manuscript the concise title, full name of the author (or authors) with highest degree, academic and professional titles, affiliations, and any institutional or other credits.

An introductory synopsis/abstract of approximately 100–150 words is required.

Tables are to be typed on separate sheets of paper, numbered, and have a brief descriptive title. The Editor reserves the right to edit tables. Be sure that statistics are consistent in both tables and text.

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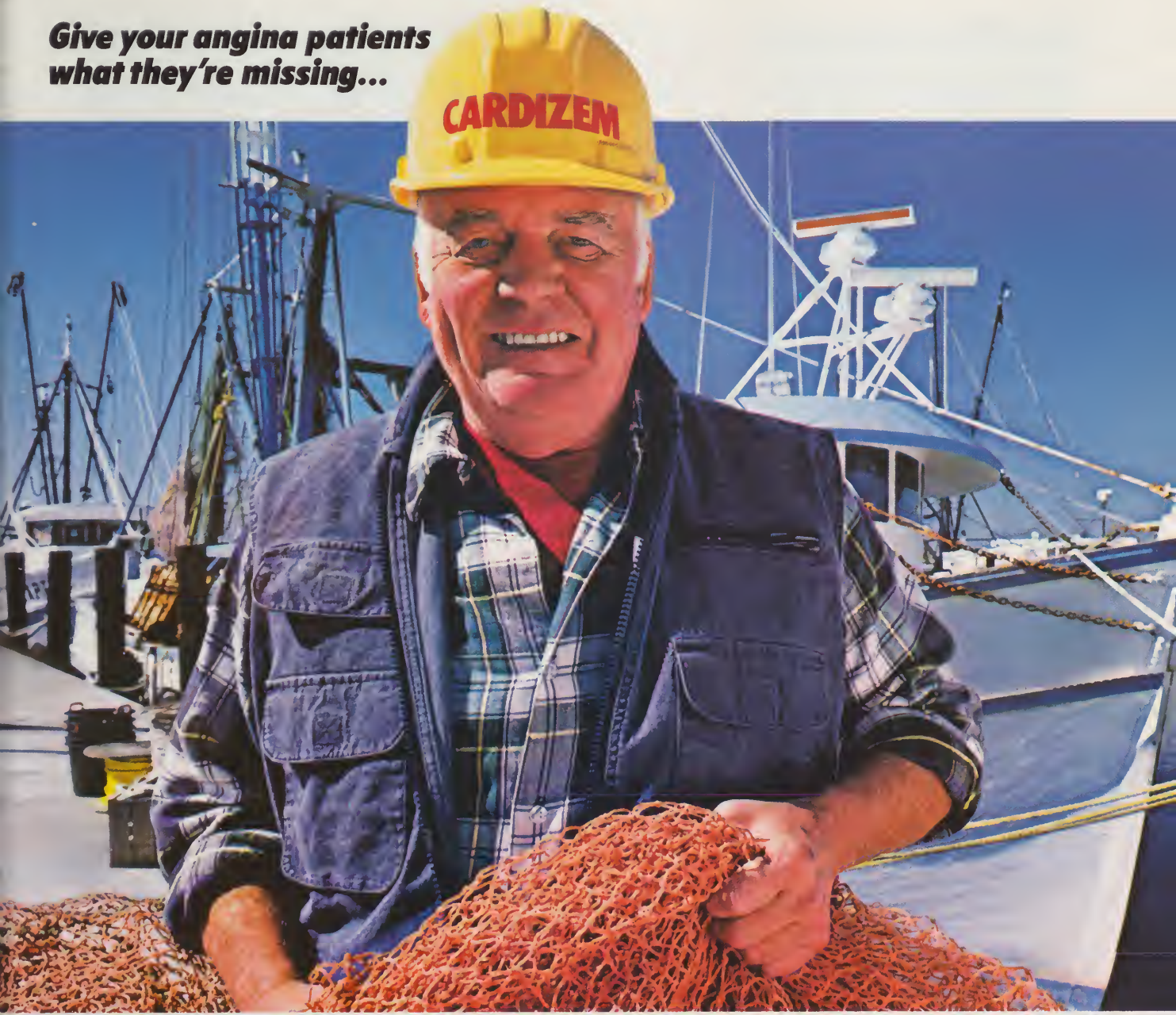
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WARNINGS

1. **Cardiac Conduction.** CARDIZEM prolongs AV node refractory periods without significantly prolonging sinus node recovery time, except in patients with sick sinus syndrome. This effect may rarely result in abnormally slow heart rates (particularly in patients with sick sinus syndrome) or second- or third-degree AV block (six of 1,243 patients for 0.48%). Concomitant use of diltiazem with beta-blockers or digitalis may result in additive effects on cardiac conduction. A patient with Prinzmetal's angina developed periods of asystole (2 to 5 seconds) after a single dose of 60 mg of diltiazem.
2. **Congestive Heart Failure.** Although diltiazem has a negative inotropic effect in isolated animal tissue preparations, hemodynamic studies in humans with normal ventricular function have not shown a reduction in cardiac index nor consistent negative effects on contractility (dp/dt).
   Experience with the use of CARDIZEM alone or in combination with beta-blockers in patients with impaired ventricular function is very limited. Caution should be exercised when using the drug in such patients.
3. **Hypotension.** Decreases in blood pressure associated with CARDIZEM therapy may occasionally result in symptomatic hypotension.
4. **Acute Hepatic Injury.** In rare instances, significant elevations in enzymes such as alkaline phosphatase, CPK, LDH, SGOT, SGPT, and other symptoms consistent with acute hepatic injury have been noted. These reactions have been reversible upon discontinuation of drug therapy. The relationship to CARDIZEM is uncertain in most cases, but probable in some. (See PRECAUTIONS.)

PRECAUTIONS

General. CARDIZEM (diltiazem hydrochloride) is extensively metabolized by the liver and excreted by the kidneys and in bile. As with any new drug given over prolonged periods, laboratory parameters should be monitored at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic function. In subacute and chronic dog and rat studies designed to produce toxicity, high doses of diltiazem were associated with hepatic damage. In special subacute hepatic studies, oral doses of 125 mg/kg and higher in rats were associated with histological changes in the liver which were reversible when the drug was discontinued. In dogs, doses of 20 mg/kg were also associated with hepatic changes; however, these changes were reversible with continued dosing.

Drug Interaction. Pharmacologic studies indicate that there may be additive effects in prolonging AV conduction when using beta-blockers or digitalis concomitantly with CARDIZEM. (See WARNINGS.)

Controlled and uncontrolled domestic studies suggest that concomitant use of CARDIZEM and beta-blockers or digitalis is usually well tolerated. Available data are not sufficient, however, to predict the effects of concomitant treatment, particularly in patients with left ventricular dysfunction or cardiac conduction abnormalities. In healthy volunteers, diltiazem has been shown to increase serum digoxin levels up to 20%.

Carcinogenesis, Mutagenesis, Impairment of Fertility. A 24-month study in rats and a 21-month study in mice showed no evidence of carcinogenicity. There was also no mutagenic response in in vitro bacterial tests. No intrinsic effect on fertility was observed in rats.

Pregnancy. Category C. Reproduction studies have been conducted in mice, rats, and rabbits. Administration of doses ranging from five to ten times greater (on a mg/kg basis) than the daily recommended therapeutic dose has resulted in embryo and fetal lethality. These doses, in some studies, have been reported to cause skeletal abnormalities. In the perinatal/postnatal studies, there was some reduction in early individual pup weights and survival rates. There was an increased incidence of stillbirths at doses of 20 times the human dose or greater.

There are no well-controlled studies in pregnant women; therefore, use CARDIZEM in pregnant women only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. Diltiazem is excreted in human milk. One report suggests that concentrations in breast milk may approximate serum levels. If use of CARDIZEM is deemed essential, an alternative method of infant feeding should be instituted.

Pediatric Use. Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

Serious adverse reactions have been rare in studies carried out to date, but if should be recognized that patients with impaired ventricular function and cardiac conduction abnormalities have usually been excluded.

In domestic placebo-controlled trials, the incidence of adverse reactions reported during CARDIZEM therapy was not greater than that reported during placebo therapy.

The following represent occurrences observed in clinical studies which can be at least reasonably associated with the pharmacology of calcium influx inhibition. In many cases, the relationship to CARDIZEM has not been established. The most common occurrences as well as their frequency of presentation are: edema (2.4%), headache (2.1%), nausea (1.9%), dizziness (1.5%), rash (1.3%), asthenia (1.2%). In addition, the following events were reported infrequently (less than 1%):

Cardiovascular:	Angina, arrhythmia, AV block (first degree), AV block (second or third degree — see conduction warning), bradycardia, congestive heart failure, flushing, hypotension, palpitations, syncope.
Nervous System:	Amnesia, gait abnormality, hallucinations, insomnia, nervousness, paresthesia, personality change, somnolence, tinnitus, tremor.
Gastrointestinal:	Anorexia, constipation, diarrhea, dyspepsia, dysgeusia, mild elevations of alkaline phosphatase, SGOT, SGPT, and LDH (see hepatic warnings), vomiting, weight increase.
Dermatologic:	Petechiae, pruritus, photosensitivity, urticaria.
Other:	Amblyopia, dyspnea, epistaxis, eye irritation, hyperglycemia, nasal congestion, nocturia, osteoarticular pain, polyuria, sexual difficulties.

The following postmarketing events have been reported infrequently in patients receiving CARDIZEM: alopecia, gingival hyperplasia, erythema multiforme, and leukopenia. However, a definitive cause and effect between these events and CARDIZEM therapy is yet to be established.

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Magnetic Imaging Evaluation of the Musculoskeletal System

JOHN L. SHERMAN MD, MICHAEL J. REING MD, ROBERT G. LOEFFLER MD, BRUCE J. BOWEN MD, and HOWARD A. SACHS MD

Magnetic resonance imaging (MR), clinically available for three years, has been applied to the study of neurological diseases with great success. In the past year developments in MR indicate this success will be repeated in evaluation of musculoskeletal diseases. Chief among these developments is refinement of surface coil technology and its application to the study of the spine and extremities.

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Magnetic resonance scanners are now readily available in many communities, and the techniques used to produce images are subject to almost infinite variations (unlike computerized tomography (CT) where the variables are limited). Machine factors that can be varied include choice of sequence (spin-echo, inversion recovery, free induction decay, etc.), echo delay time (TE), repetition time (TR), section thickness, matrix size, number of averages for data acquisition, phase-encoding direction, field-of-view, image orientation, number of sections, type of radio frequency (RF) coil. The magnetic field strength may vary between different machines, but it cannot be varied practically on the same machine.

All images in this report were performed on a 0.5 T whole-body superconductive magnet.* Sections were 3.5 mm or 5.0 mm thick. All the selected images were drawn from our case files of over 12,000 patients, of which approximately 40 percent are musculoskeletal studies. The exam time for each patient was 40 to 60 minutes (longer if multiple different areas of the body were studied at the same setting).

One of the most important determinants of image quality is the availability and effectiveness of surface coils. Surface coils allow improved signal-to-noise ratio over a limited distance. Techniques using surface coils trade off the larger area that can be visualized with the standard coil for thinner sections and improved spatial resolution.

Surface coil MR is well suited for examination of the musculoskeletal system. The coil can be positioned over any area of the spine and around extremities. With the surface coil in place, the MR exam is performed using several different techniques that allow separation of various tissues. Some techniques provide excellent delineation of bony detail, dispelling earlier statements that MR was not useful in the evaluation of bone disease.

MR has been used extensively to study the spine, and its usefulness in this area is becoming well known. Less well known are the recent advances in other musculoskeletal areas. For example, MR has been used with increasing success in the evaluation of avascular necrosis, meniscal and tendinous injuries, congenital hip dislocation, bone marrow disease, musculoskeletal tumors, osteomyelitis, and joint diseases including temporomandibular joint (TMJ) disorders.

The main advantage of MR (compared with CT, radiography, and bone scanning) is the ability to delineate directly bone marrow, cartilage, and tendons. Subtle differences in soft-tissues are demarcated without the use of injectable contrast agents. Images can be presented in the coronal or sagittal projections rather than being limited to the axial plane as with CT. MR does not use ionizing radiation, and there are no known deleterious effects. Thus, repeated examinations can be performed safely. See the Table for a summary of the advantages and disadvantages of MR of the musculoskeletal system.

Spine

It has been shown that MR can demonstrate normal spinal anatomy and a variety of pathologic conditions

Table. Magnetic Imaging Evaluation of the Musculoskeletal System

Advantages
No ionizing radiation
Injectable contrast not needed
Superior soft tissue contrast including cartilage
Images shown in coronal, sagittal, and axial projections
Ease of patient position. No manipulation of patient necessary
Family member or attendant may stay in room with patient
Disadvantages
Higher cost than CT
Inability to depict small calcifications
Trabecular detail not as good as CT
Exam usually longer than CT study
MR scanning gantry is more confining than CT

* Vista-MR, Picker International Corporation, Highland Heights, Ohio.



Figure 1. Midline sagittal images of the spine. Note small HNP at L5-S1 (black arrow). HNP is well seen using two different techniques. (A) In this technique the CSF appears dark. Section thickness is 3.5 mm. Conus medullaris (white arrow), nerve roots of cauda equina (arrowhead). (B) Same section using different technique. CSF is bright. Decreased intensity in L5-S1 disc (white arrow) compared to other levels indicates disc degeneration.

in a noninvasive fashion in an outpatient setting.[1] The use of MR in the evaluation of the spine has become widespread, often supplanting other studies such as CT, myelography, and radionuclide scanning. Diseases of the vertebral bodies, paravertebral soft-tissues intervertebral discs, and spinal cord are seen equally well, Figure 1.

Use of MR in the evaluation of routine lumbar disc disease remains controversial. When compared to fourth generation CT scanners, CT and MR are probably equal in the detection of disc disease. CT is better for evaluation of facet joint arthritis, while MR is superior in the evaluation of the spinal cord and bone marrow of the vertebrae. MR also reveals a larger area of the spine. There is less controversy concerning the evaluation of cervical disc disease and the current consensus is that MR is superior in the thoracic spine.

Knee

Until recently, the spatial resolution of MR imagers had been inadequate for the diagnosis of small meniscal tears. The introduction of the surface coil has permitted identification of these and other lesions. New software has provided means for enhancing tissue contrast. The fibrocartilaginous meniscus (containing Type I collagen) can be clearly demarcated from hyaline cartilage (containing Type II collagen) (Figures 2–4). MR can accurately assess the cartilaginous thickness of the knee joint. Ligaments of the knee, including the cruciates, are directly visualized. Joint effusions are clearly de-



Figure 2. Normal knee. Section thickness is 3.5 mm. (A) Midline sagittal image. Posterior cruciate ligament is well demarcated (arrows). (B) Sagittal image lateral to (A). Anterior cruciate ligament is seen in its entirety (arrowheads). The thicker posterior cruciate is partly seen in this section (arrow). (C) Lateral parasagittal section. Posterior horn of lateral meniscus (white arrow). Anterior horn of lateral meniscus (white arrowhead). Note the difference in the "bright" hyaline cartilage of the patella (black arrows) compared to the fibrocartilage of the meniscus.

picted.[2] Examination is performed without manipulating the knee, and injections are not necessary. The main disadvantage is the higher cost of the study when compared to knee arthrography. The true false-positive (for meniscal injury) rate is not known, but the predictive value of a negative MR image has been reported to be almost 100 percent.[2]

Avascular Necrosis

One of the earliest and most successful applications of MR has been in the evaluation of avascular necrosis (AVN) of the hip (Figures 5 and 6). Surface coils are applicable but usually are not necessary for hip evaluation. Recent reports have shown that MR (without surface coil imaging) is the most sensitive imaging technique for early diagnosis of AVN.[3] MR was better than CT by more than two standard errors and better than radionuclide scanning by over three standard errors. MR also has been used to detect AVN in the humeri, wrist, tibias, and distal femoral bones.

Musculoskeletal Tumors

An important part of staging musculoskeletal tumors is the accurate determination of the tumor margins



Figure 3. Tear in posterior horn of medial meniscus (arrow).



Figure 4. Torn posterior cruciate ligament. Compare to Figure 1. Margin of torn ligament (arrowheads). Anterior cruciate ligament is intact (arrows).



Figure 5. Four-year-old male with Legge-Perthes disease. Avascular necrosis in left femoral epiphysis (arrows) is clearly demarcated from normal right side. Note "bright" hyaline cartilage femoral head and acetabulum.

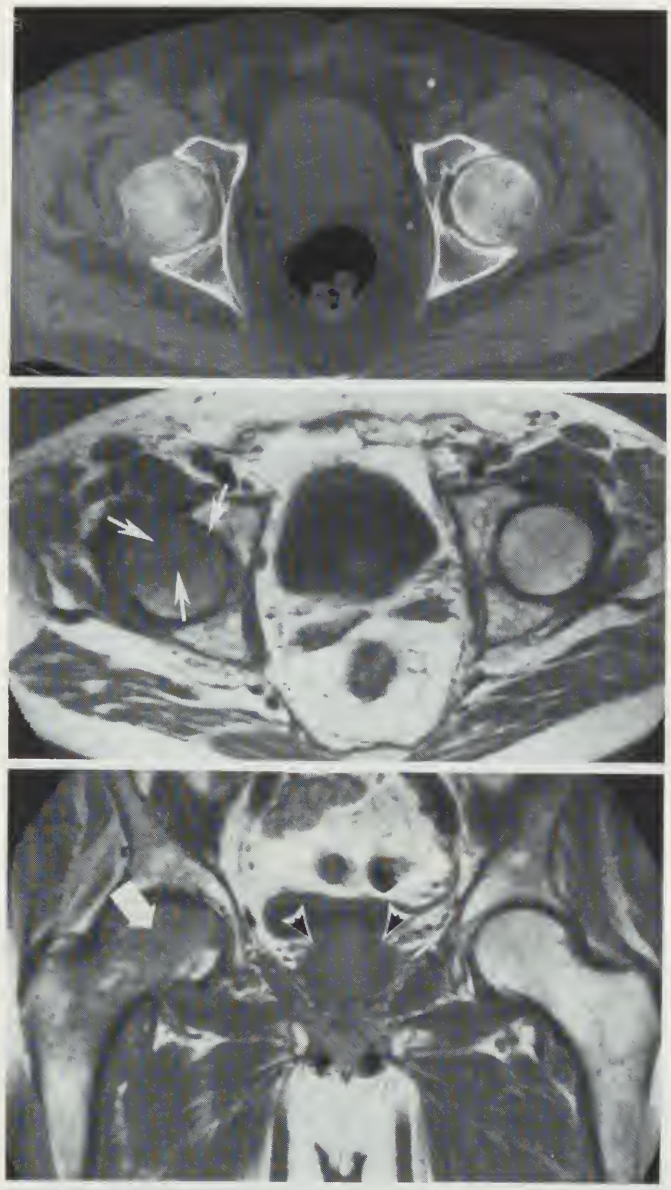


Figure 6. Seventy-four-year-old male with avascular necrosis (AVN). (A) CT scan of hips is normal. (B) Axial MR scan at same level as CT scan reveals abnormal decreased intensity in right femoral head (arrows). (C) Coronal MR scan of same patient. AVN of right hip (arrow) is clearly demarcated when compared to normal left hip. Prostate (arrowheads) is mildly enlarged.

(Figure 7). Early reports indicated that CT and MR were equal in the evaluation of these neoplasms.[4] More recent reports indicate soft-tissue masses are more distinctly imaged by MR than by CT and their margins are frequently more clearly defined.[5] MR imaging does not provide histologic specificity and fails to detect small calcifications and soft-tissue gas. In some cases, both MR and CT are necessary, however MR appears to be superior in the determination of the extent of bone-marrow involvement by neoplastic disease. The coronal and sagittal presentation of the MR images is generally more useful to the orthopedic surgeon especially for the planning of a surgical approach.

Infection

MR has a high sensitivity for the detection of inflammatory disease involving the musculoskeletal system. In the spine, MR not only is sensitive to the detection of an inflammatory process but also is highly specific. In the appendicular skeleton and pelvis it is unclear whether MR can add to the sensitivity and specificity of radionuclide studies. However, MR can be performed

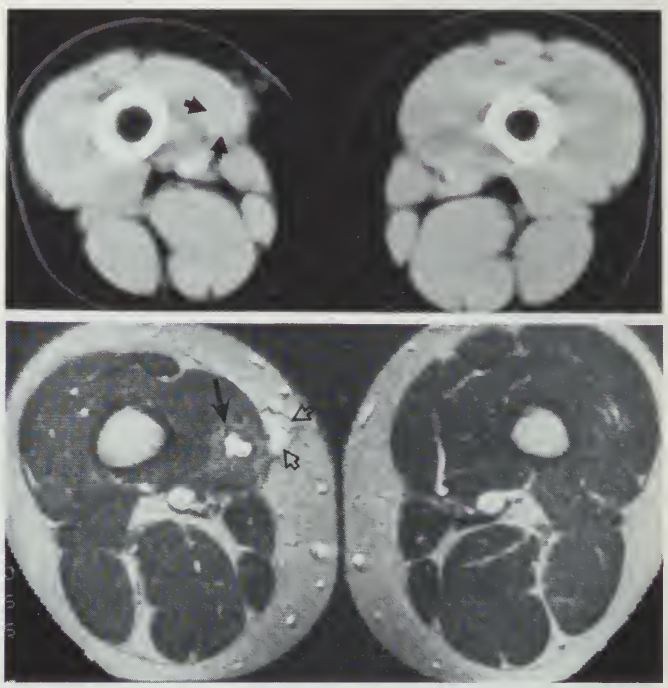


Figure 7. Fifteen-year-old male with fibrosarcoma of right thigh. (A) Axial MR scan shows tumor clearly demarcated from adjacent musculature (solid arrow). Note involvement of subcutaneous fat after biopsy (open arrows). Also note clear visualization of bone marrow and parosteal region. (B) Contrast enhanced CT scan at same level. CT study was obtained 1 day after MR scan. Tumor is not as clearly seen (black arrows).

more rapidly and provides greater anatomic detail and delineation of marrow involvement than do radionuclide studies. It has limited value in the postoperative period and in the presence of metallic implants. It is better than radionuclide studies for differentiating soft tissue infection with periostitis from osteomyelitis.[6,7]

Miscellaneous

The place of MR in the evaluation of a number of other musculoskeletal disorders is being determined. We have found MR very useful in evaluation of congenital hip dislocation in infants (Figure 8). The relationships of the nonossified femoral head and acetabulum can be clearly delineated. The thickened joint capsule and the developing pseudoacetabulum are shown in positive cases. Subtle degrees of subluxations in any plane (including posterior subluxations) are readily detected. The child must be sedated, but the study is performed quickly.

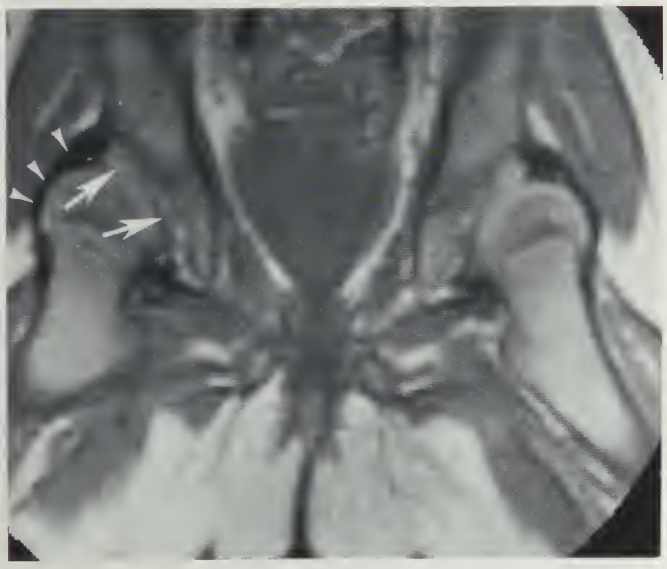


Figure 8. One-year-old female. Mild congenital acetabular dysplasia is present. Note shallow acetabular fossae (arrows). Fibrous joint capsule is clearly demarcated (arrowheads). There is no evidence of dislocation in this patient.

The TMJ is amenable to evaluation by MR using small surface coils. However, only one TMJ can be evaluated at a time. Internal derangements of the TMJ can be detected. CT can provide similar information but requires that the patient be placed in a hyperextended lateral flexed position that is sometimes difficult to maintain.

The wrist, elbow, ankle, and shoulder have been evaluated by some investigators. Initial reports indicate the usefulness of MR in the evaluation of the carpal tunnel syndrome, occult fractures of the hook of the hamate, and posttraumatic avascular necrosis of the navicular and other carpal bones.

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Commentary

Decision Making in Terminal Illness

During the last half of the twentieth century, much progress has been made in medicine as well as in other areas. Most infectious diseases can be prevented or cured with antibiotics, and the duration of life has increased steadily. Death can be postponed because of remarkable technological advances. Most patients die of degenerative or malignant disorders.

Now physicians often are faced with the dilemma of whether to postpone death or allow it to occur. Before, they simply had to wait for the disease to take its course. Since ours is a death-denying society, some physicians seek to maintain life at all costs, even when there is no degree of quality of life. It is difficult for many physicians to realize they often prolong dying rather than prolong living.

The attending physician plays an important role in making decisions in terminal illness. Terminal illness may be defined either as an illness that will end life in a relatively short time (such as metastatic cancer or coma from a cerebral vascular accident) or as an illness that renders life no longer meaningful, such as Alzheimer's disease. In this latter type of terminal illness, death is not due to the disease itself but to some intercurrent malignant, infectious, vascular, or other disorder. Such patients are unable to make decisions because brain damage has impaired their mentation.[1]

Most states, including Maryland, have now passed Natural Death Acts. While these laws vary from state to state, all have one thing in common: the patient indicates by a properly executed affidavit, as prescribed by the statute, that he or she does not want to be kept alive when there is no hope of recovery. A few states without Natural Death Acts have recognized the validity of so-called "living wills." In either case, the person executing the document is expressing the desire that he or she does not want to be kept alive when there is no hope of recovery.

The roles of the attending physician, lawyer, clergyman, and closest member of the family are addressed in the document. Most patients, however, do not have an affidavit or a living will and decisions must be made without benefit of explicit patient directives.

When the illness will invariably end life within a relatively short time and patients are mentally alert, they usually know this without being told. Patients are not told they are dying unless the physician agreed to tell them before the diagnosis was made. A responsible member of the family is told, and the patient is kept comfortable. Life-support measures are used unless the patient requests otherwise. When a mentally alert patient asks the physician to "end it all," there is no legal way this can be done. Organizations such as the Hemlock Society[2] are trying to have laws passed to make it possible for physicians to accede to such requests.

When the patient has been comatose for three to four weeks and shows no signs of recovery or when the EEG is flat, relatives may be told that there is no hope of recovery. If the nearest relative or guardian consents, all supportive measures can be discontinued. While this is still controversial, many people believe this should include nasogastric feeding, which is thought to be indistinguishable in any morally relevant way from other life-sustaining medical treatment.[3] If the family of a comatose patient does not agree to discontinue supportive measures, they must be continued.

When the patient is incompetent, as with Alzheimer's disease, and develops an intercurrent illness such as pneumonia or cancer, the nearest relative or guardian can instruct the physician not to treat. If the physician does not agree, he or she can be replaced by another physician who does agree.

The patient's physician is expected to exercise "best judgment" in making medical decisions, always taking into account the patient's wishes. This is especially important when dealing with death and dying. When patients have not expressed a preference and are competent to do so, a frank and open discussion with them is desirable.

Living wills can render decision making in terminal illness less difficult. When patients are not competent and have no living will, the physician should then consult with the responsible family member or guardian. Life Determination Advisory Groups or Ethics Committees can give valuable advice and support when relatives are not available or when conflicts arise. Physicians must strive to avoid prolonging the dying of terminally ill patients, giving them comfort and assistance as they complete life's final act.

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Statistical Consequences of Variation in Cause-of-Death Terminology for Chronic Ischemic Heart Disease

PAUL D. SORLIE PhD and ELLEN B. GOLD PhD

A 66 percent decline in the number of chronic ischemic heart disease deaths in Maryland between 1978 and 1979 prompted a study of death certification among Maryland physicians. Attributed to a change in the classification procedures stated in the International Classification of Diseases, the decline was exceptionally large here because physicians in general, and medical examiners in particular, had a tendency to use the specific disease terminology involved in the classification changes.

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In the fall of 1984, over 1,000 Maryland physicians were mailed a questionnaire requesting information for deaths they had recently certified. Over 80 percent responded. The questionnaire sought information on a statistical problem relevant to public health.

While the death certificate contains potentially invaluable information in quantifying disease conditions leading to death, the actual value of the information depends on a variety of factors: knowledge about cause of death available to the physician, quality of information actually recorded by the physician, consistency of physician recording, and physician's conformance to established recording rules. Additionally, the cause of death written on each certificate is numerically coded by state nosologists using the World Health Organization's classification system, which changes every 10 to 15 years; the value of death certificate information is influenced by the accuracy of this coding. Thus, there are many levels of potential imprecision and inaccuracy involved in the ultimate counts of deaths by cause.

The 1984 survey of Maryland physicians was prompted by a specific problem pertaining to the classification of deaths due to heart disease. The Figure shows that for the years 1976, 1977, and 1978 there were about 6,000 deaths per year in Maryland that were classified as due to chronic ischemic heart disease (IHD). In the years 1979, 1980, and 1981 there were about 2,000 such deaths per year. This sudden drop could have been real, but considering the many potential levels of imprecision and inaccuracy in certifying causes of death, other explanations were possible. Key to other explanations was a new 9th revision of the International Classification of Diseases (ICD) that became effective in 1979,[1] while in the prior 11 years, the 8th revision ICD was used.[2]

To understand and explain the reasons for the precipitous decline, a study of the certification of heart disease deaths in Maryland was initiated.[3] The study received the endorsement of the Maryland Medical and Chirurgical Faculty and approval of the Maryland Center for Health Statistics. It was conducted as a collaborative study by the National Heart, Lung, and Blood Institute and The Johns Hopkins University School of Hygiene and Public Health.

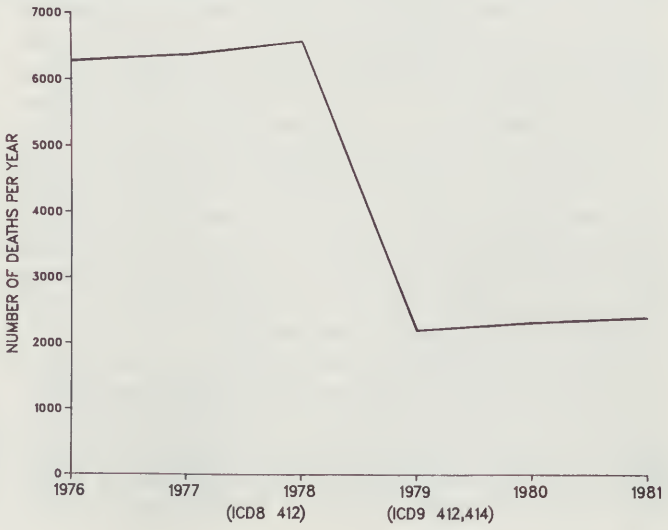
Methods

All deaths due to heart disease occurring in Maryland in April or May 1984 were selected for study. Heart disease deaths during this period were defined by codes 390 to 429 of the 9th revision ICD; there were 2,271 such deaths.

Information on the age, sex, and race of the decedent, the place of death, and information on whether the certifying physician was a medical examiner, staff physician, attending physician, or medical director was abstracted from the death certificate.

In the second phase of data collection, the physician who signed the certificate was identified, and a questionnaire was sent regarding the diagnostic information available during the final illness and the nature of the contact between the physician and patient. It also requested comments on the inadequacies of the current procedures for recording cause of death on the certifi-

Figure. Number of Deaths Due to Chronic Ischemic Heart Disease in Maryland



cate. If the physician signed more than one certificate in the two-month period, a questionnaire was sent for the first death certified. If the physician signed another certificate more than 30 days after the first, this other death also was queried.

Information was abstracted from the American Medical Association directory regarding the medical school and type of practice of the certifying physician.[4] It must be stressed that physician and decedent information was kept confidential; there was no interest in or intent to identify individuals. The goal was to analyze groups by various decedent and physician characteristics so as to understand the strengths and weaknesses of the death certification process.

Cause of death was coded using both the 8th and 9th revision of the ICD to understand the changes resulting from these two different classification systems.

Results

The large decline in numbers of chronic IHD deaths in the Figure was determined to be the result of a change in classification rules between the 8th and 9th revisions of the ICD. Up to 1978, the 8th revision rules stated that the cause-of-death term "arteriosclerotic cardiovascular disease" was classified as chronic IHD. From 1979, the 9th revision rules stated that the term would be classified as either ill-defined heart disease (if hypertension was **not** mentioned) or hypertensive heart disease (if hypertension was mentioned). The coding of the sample of Maryland death certificates by both ICD revisions demonstrated the consequence of this rule change.

Of the 1,029 death certificates in the sample coded as chronic IHD in the 8th revision (ICD8, code 412), only 38 percent were still coded as chronic IHD in the 9th revision (ICD9, code 412, 414). A death was classified in the 8th revision as chronic IHD when the underlying cause was described with terms such as atherosclerotic heart disease, coronary artery disease, ischemic cardiac disease, coronary heart disease, or arteriosclerotic cardiovascular disease (ASCVD). In the 9th revision, the only change was the removal of deaths described with the term ASCVD from this category. This apparently trivial change resulted in the removal of almost two-thirds of the chronic IHD deaths with a large increase in the number of deaths in the two new categories to which they were assigned.

This rule change was deliberate, and some artifactual decline for chronic IHD was anticipated between the 8th and 9th revisions. Of concern was the observation that 50 states were not uniform in the magnitude of the drop. In Maryland approximately two-thirds of deaths were removed from the chronic IHD category by the 9th revision rules, while in the United States about 27 percent were removed and in some states (Massachusetts, for one) only 10 percent were removed. A greater proportion were removed in Maryland because physicians in Maryland have a greater tendency to record chronic IHD deaths using the term ASCVD.

To understand why Maryland is somewhat different in this choice of terminology, characteristics of the decedent and certifier were tabulated with respect to the terminology used to certify the death. The foremost finding was that as a group, medical examiner certifications were very likely to be recorded using ASCVD terms. Approximately 80 percent of chronic IHD deaths under the 8th revision were recorded as ASCVD by medical examiners; the equivalent percentage recorded by attending and staff physicians was 50 percent. This difference was statistically significant at $p < .05$.

Physicians differed in their choice of cause-of-death terms according to medical school attended. In Table 1, graduates of the University of Maryland Medical School were more likely to choose the ASCVD terms than were graduates of other medical schools, particularly those in the Baltimore-Washington area.

Table 1 also shows differences in the terminology used by the types of diagnostic information available to

Table 1. Ischemic Heart Disease Deaths* Recorded with Cardiovascular Terms (ASCVD)

	Percent Recorded as ASCVD
Medical school of certifier	
U. Maryland Medical School	63
Other Baltimore-Washington area medical schools	33
Other U.S. medical schools	44
Foreign medical schools	48
Diagnostic methods available to certifier	
Advanced methods†	22
Basic methods††	49
Neither of above	53
Time under certifier's care	
None or less than 1 week	48
Weeks or months	25
Years	51

* Sample consists of the first death from each certifier in April-May 1984, whose cause of death was coded as chronic IHD in the 8th ICD revision (412), and coded in the 9th revision as ICD (414, 429.2, and 402.9).

† Advanced methods: basic criteria plus any of one of echocardiography, angiography, exercise tolerance test, or surgery.

†† Basic methods: history by the patient, history by the family, physical examination, electrocardiography, serum enzymes (any 3 of these 5).

the physician. Basic diagnostic methods were considered available if any three of the following five methods were present: history by the patient, history by the family, physical examination, electrocardiography, or serum enzymes. Advanced diagnostic methods were considered available if in addition to these basic methods, at least one of the following was present: echocardiography, angiography, exercise tolerance test, or surgery. When more advanced methods were available, physicians were less likely to use the ASCVD term to describe the death.

Table 1 showed that word use differed by the length of time during which the patient was under the physician's care. Those physicians who had seen the patient for a short time (less than one week) or a long time (years) were more likely to record these deaths with ASCVD terms.

Physicians also appeared to use terms differently for different characteristics of the patient. Male decedents were less likely than females to have their death classified using ASCVD terms, whites less likely than blacks, and married less likely than nonmarried decedents. Age of the decedent, disability status, and place of death (hospital, nursing home, etc.) were not related to the use of ASCVD terms.

Table 2 presents the variation in recorded terminology by geographical area in Maryland. There is a large range, with Baltimore County having 73 percent of chronic IHD deaths recorded with ASCVD terms and Montgomery County having 22 percent recorded as ASCVD.

Table 2. Ischemic Heart Disease Deaths* Recorded with Cardiovascular Terms (ASCVD) (Deaths not Certified by Medical Examiner)

Geographical Area	Percent Recorded with ASCVD Terms
Baltimore County	73
Eastern Shore (Kent, Queen Anne's, Talbot, Caroline, Dorchester, Wicomico, Somerset, Worcester)	65
Baltimore City	56
Suburban Baltimore Counties (Carroll, Howard, Anne Arundel)	51
Southern Maryland (Calvert, Charles, St. Mary's)	50
Mountain Counties (Garrett, Allegany, Washington, Frederick)	43
Northeastern Maryland (Harford, Cecil)	33
Prince George's County	31
Montgomery County	22
Maryland State Total	50

* Sample consists of all nonmedical examiner deaths in April-May 1984 whose cause of death was coded as chronic IHD in the 8th ICD revision (412), and coded as ICD codes (414, 429.9, and 402.9), using the 9th ICD revision.

Discussion

One might consider these findings in the context of the following circumstance: An elderly patient has been seeing the same physician over the past 10 years for a variety of problems including mild diabetes, arthritis, angina pectoris, and occasional episodes of congestive heart failure. After a particularly uncomfortable day with periods of indigestion and dizziness, the patient went to bed, to be found unconscious the next morning by the spouse. The patient was rushed to the hospital and was pronounced dead on arrival.

After reviewing the history and circumstances, two different physicians could have completed two different death certificates as follows:

	Physician A	Physician B
Immediate cause	Cardiopulmonary arrest	Cardiac arrest
due to:	heart failure	congestive heart failure
due to:	arteriosclerotic heart disease (ASHD)	arteriosclerotic cardiovascular disease (ASCVD)
Contributing	—	diabetes, arthritis

The death certificates were sent to the vital statistics offices for permanent filing as legal documents and as a source of information on disease conditions leading to death. The cause-of-death coders code each cause using the International Classification of Diseases, and they determine the "underlying cause of death," which is the "condition that started the sequence of events between normal health and the immediate cause of death" used for statistical purposes.[5]

For physician A the underlying cause was ASHD, and for physician B it was ASCVD. These two similar conditions will be assigned to two different classification categories in the 9th revision ICD, code 414.0 for physician A and code 429.2 for physician B.

For physicians who have little confidence in the accuracy of current procedures for recording cause of death, the previously described anomaly in the classification procedures for chronic IHD and its consequences must confirm their suspicions that the death certificate has value only as a legal document. However, the classification problem is not insurmountable, and it can be corrected using a different grouping of categories. The artifactual decline in the Figure will disappear when equivalent categories are used to compare the time periods.

A less correctable problem is that variation in terminology used by physicians has resulted in a different distribution of chronic IHD deaths in Maryland than in other states. This study suggests that Maryland physicians appear more likely to certify chronic IHD deaths using Physician B's terminology (ASCVD). Also within Maryland, this choice of terminology was associated with many other factors, implying that specific cause-of-death descriptions, which are known not to be uniform between physicians, may vary by factors unrelated to the disease itself (that is, medical school training or terminology used in certain geographical areas). This is not to say that Maryland physicians are using incorrect terminology but rather that variation in terminology has its consequences. In conversation with some medical examiners, the use of ASCVD terminology is defended since a more definitive diagnosis often cannot be made.

The certification process itself is a main source of physician variation, and the inadequacies of the process need to be identified. The questionnaire to Maryland physicians asked directly about the deficiencies they encountered in the certification process. In summary, the deficiencies described by certifying physicians are:

1. Inadequate training and guidelines for physicians completing death certificates
2. Insufficient information available to physicians to make a determination (lab reports not back, autopsy not performed, no medical history available)
3. No provision for genuine uncertainty in describing the cause of death
4. Inadequate space and poor formatting of information on the death certificate
5. Difficulty in recording cause of death using existing format when multiple underlying causes are present
6. Difficulty in determining proper sequencing of diseases in the "due to" lines on the death certificate

Although the death certification process is difficult to execute in a manner completely free of bias and error, improvements can be made. The cause-of-death statements are valuable: cause-of-death statistics **will** be used, as death certificates are the primary source of such information in the United States.

While the death certificate form and the certification process must change, the attending physician can improve the usefulness of cause of death data. Ambiguous terminology needs to be resolved and standard terms adopted that are universally recognized and consistently used. Physicians can conscientiously complete the cause-of-death portions of certificates as accurately as possible following the instructions regarding immediate, underlying, and contributory causes. A physicians' handbook[5] is available and can be obtained from the National Center for Health Statistics, Hyattsville, MD. Instruction within medical school curriculum on completing a death certificate can be encouraged.

Uncertainties in the certification process are recognized when the physician signs the statement "in my opinion the death occurred on the date and hour and from the causes stated above." However, as stated in the physician's handbook, "the attending physician is usually in a better position than any other individual to make a judgment as to which of the conditions led directly to death and to state the antecedent condition, if any, which gave rise to this cause."

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Rocky Mountain Spotted Fever Manifested by Cerebritis and Pneumonitis

PRADEEP GARG MD and DAVID A. BLASS MD

Rocky Mountain spotted fever is the most common rickettsial infection in the United States, but it's diagnosis at times remains elusive. The classic triad of fever, tick bite, and rash is often absent, yet early diagnosis and institution of therapy is a major deterrent of morbidity and mortality. We report an unusual case of Rocky Mountain spotted fever not only lacking the classic presentation but also demonstrating two life-threatening manifestations.

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Rocky Mountain spotted fever (RMSF), an acute febrile illness caused by Rickettsia rickettsiae, classically presents with fever, rash, and history of tick bite. It is endemic in certain areas of the United States. Presentations are varied, and the early diagnosis of RMSF continues to be difficult in many patients. In the following atypical and confusing presentation the patient had gastrointestinal and pulmonary symptoms initially and went on to have critical involvement of both central nervous system and the lungs. The late appearance of the characteristic skin rash was a contributing factor in the delay in diagnosis.

Case Report

A 60-year-old Caucasian male was admitted to the hospital with a week-long history of fever, diarrhea, rash, and cough with sputum production. He was seen in the emergency room four days prior to admission with complaints of several days of fever, chills, body aches, diarrhea, and cough. The diagnosis was an exacerbation of chronic bronchitis, and he was sent home on Ampicillin with advice to follow-up in clinic after three days.

Three days later, he developed a skin rash, and the diarrhea became worse. On follow-up examination, his symptoms were worse, and he appeared ill; he was admitted to the hospital. No history of tick bite was elicited.

The physical examination on admission showed a well-developed, well-nourished white male in mild respiratory distress. The temperature was 100.6° F, pulse 120/min, BP 110/70, and respirations 28/min. The HEENT examination was completely unremarkable. Percussion of the chest showed a tympanitic note all over; no areas of dullness were noted. Auscultation of the lungs showed expiratory wheezing and bilateral rhonchi. Examination of the heart revealed normal heart sounds with no murmur or gallop.

The skin exam revealed a macular erythematous rash mainly in the lower part of the abdomen and lower extremities that did not blanch on pressure. There was no rash on palms of the hand and soles of feet. The rest of physical examination was unremarkable.

Initial laboratory studies revealed a white blood cell count of 5100 cells/cu mm (58 percent segs, 33 percent bands). Hemoglobin was 12.7 gm/dl, sodium 128 mEq/dl, BUN 20mg/dl, creatinine 1.4mg/dl. An arterial blood gas, taken while the patient was breathing room air revealed pH 7.53, PCO2 29, PO2 59, HCO 24. The erythrocyte sedimentation rate was 10mm/hr. Blood, urine, and sputum were sent for cultures.

The patient was admitted with presumptive diagnosis of acute exacerbation of chronic obstructive pulmonary disease (COPD), bronchitis, and drug reaction. He was treated with bronchodilators and intravenous erythromycin. During the next 24 hours, his temperature continued to rise as high as 105° F, and antibiotics were changed to IV cefalothin. The diarrhea continued to be frequent (5 times daily) and loose without blood or mucus.

The physical examination after 36 hours revealed hepatosplenomegaly and slight jaundice. The liver enzymes were noted to have risen markedly since his ER visit; LDH rose from 378 to 788, SGOT from 39 to 129, and SGPT from 23 to 69. The total bilirubin was 1.5 with indirect of 1.0 and direct of 0.5. The WBC then was 3600/cu mm. After about 60 hours in hospital, the patient became very dyspneic, tachypneic, and disoriented. The rash was noted to be spreading to his palms and soles bilaterally. In some areas, the rash coalesced to form large confluent areas. At this point, the diagnosis of RMSF was strongly considered, and chloramphenicol, oxacillin, and gentamicin were started. Blood was sent for febrile agglutinins and indirect fluorescent antibody for RMSF.

The patient's condition continued to deteriorate with increasing respiratory distress and lethargy; he was then transferred to the intensive care unit. The patient was intubated and mechanical ventilation was instituted. Chest x-ray demonstrated a patchy left lower lobe infiltrate. Lumbar puncture was not performed due to a platelet count of 43,000; antibiotics were continued in doses appropriate for meningitis. When the febrile agglutinins were reported as positive (OX-19 as 1:160 and OX-2 as 1:320), the gentamicin and oxacillin were discontinued. Over the next 2½ days, his respiratory status improved, and he became more responsive, alert, and oriented. He was extubated and noted to be slightly hard of hearing at that time.

The day after transfer to the intensive care unit, the indirect immunofluorescent antibody titer was reported as 1:256, a value diagnostic for RMSF. On chloramphenicol, the patient continued to improve, becoming afebrile and with normalization of laboratory values and chest x-ray. A mild hearing defect persisted, and he was discharged to home on the twenty-third hospital day.

Discussion

Rocky Mountain spotted fever, the most common rickettsial infection in the United States, is caused by Rickettsia rickettsii that is transmitted to man by the bite of various species of ticks. The incidence of RMSF is highest during May and June though the disease is prevalent from April to November/December.

The early diagnosis of RMSF is very important for the appropriate management and the prognosis of a particular patient. In a recent survey of 262 cases, nearly 85 percent of dying patients had a median interval of 7 days until the diagnosis was made; whereas 90 percent of surviving patients had a median interval of only 5 days.[1] The clinical history, social history, and epidemiological assessment can be invaluable in reaching a correct diagnosis, but appropriate details may be lacking or inaccurate for a variety of reasons.

Classically, RMSF presents with a triad of fever, rash, and a history of tick bite. The observation of Helmick[1] and others[2–4] was that the delay in diagnosis and subsequent treatment seemed to result from atypical initial presentations, including the later appearance of rash. Sometimes, there is no history of tick exposure and no appearance of rash. In Helmick's series,[1] 33 percent of patients did not have the classic triad at any time during their illness. Sixty-seven percent of dying patients had a first symptom other than fever, rash, or headache, compared with 12 percent of patients who survived. A wide variety of atypical signs and symptoms were seen including hepatomegaly (12 percent), jaundice (9 percent), and stupor (26 percent), with a much higher frequency seen in patients who died from the disease (55 percent, 40 percent, and 88 percent, respectively).

In our case, several factors delayed the diagnosis. The patient's chief complaints were fever, diarrhea, and cough. He also had complaints of chest pain, body ache, and headache at various times. Physical examination revealed hepatomegaly, splenomegaly, and jaundice. He also developed a late rash (on the eighth day), which appeared after he had been given Ampicillin, further complicating the picture. The rash involved the lower extremities and trunk without any blanching. Characteristically, rash appears between the third to fifth day and is erythematous, macular, and initially blanches on pressure. The macular lesions of rash usually appear distally on the extremities and spread centripetally over the trunk.

The social and epidemiological aspects of our case were interesting. The patient's social history (obtained later) revealed he spent most of his day collecting plastic cans and other debris in wooded areas of Western Maryland. Typically, such details are available more readily on children, whose parents are very eager to help with diagnosis, than they are on adults who may not be as concerned with their own illnesses.

Diagnosis of RMSF is confirmed by serological testing, isolation of richettsiae, or fluorescent antibody staining of biopsy or autopsy specimens. The serological confirmation requires a single complement fixation (CF) titer 1:16 or higher, single indirect fluorescent antibody (IFA) tier 1:64 or higher, or fourfold rise in the CF, IFA, microagglutination (MA), latex agglutination (LA), or indirect hemagglutination (IHA) assays. Cases are classified as "probable" if there is a fourfold rise in titer or single titer 1:320 or higher in the Weil-Felix assay (Proteus OX-19 or OX-2) or a latex agglutination, microagglutination, or indirect hemagglutination titer 1:128 or higher.[5] Our patient had a single titer of 1:320 and higher in the Weil-Felix assay and a single indirect fluorescent antibody titer of 1:256.

Vasculitis resulting in inflammation of the endothelial cells of the small capillaries and venules is the pathological entity resulting in clinical manifestations. Almost all organs can be involved in this disease; the lungs and brain have a large potential for life-threatening involvement.[6] Both these organs were seriously involved in the present case and became obtunded, leading to intubation. Treatment with chloramphenicol (the drug of choice) resulted in a dramatic improvement in the patient's condition leading to successful extubation and recovery of mental status. (In their series Helmick *et al.* found a positive response of 42 percent when patients were treated initially with chloramphenicol or tetracycline).

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Commentary

Early Diagnosis and Treatment Cures RMSF

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The minimal criteria for suspicion of Rocky Mountain spotted fever (RMSF) are unexplained fever and headache in a person with a history of exposure in a wooded area during the months of April to October. The history of a tick bite is added evidence, and the presence of a characteristic pink macular rash on the palms, soles, forearms, and legs are clinically diagnostic.

In some patients, there may be nausea and vomiting with abdominal pain simulating either appendicitis, cholecystitis, or gastroenteritis with diarrhea. Jaundice occurs but is infrequent. Other patients may have a nonproductive cough with wheezes and/or pulmonary rales that suggest pneumonitis. Usually the x-ray findings of the lungs are minimal with patchy areas of infiltration.

The central nervous systems findings are common. Headache is usually severe and frontal in localization. Usually the patient is restless and irritable with insomnia. These findings may progress to confusion, muttering delirium, strabismus, athetoid movements, and coma. Nuchal rigidity and myalgia are very common features. Deafness often occurs and subsides during convalescence.

Physicians practicing in Maryland and other well-known endemic areas of RMSF must be alert to the presence of this serious illness and not always expect to find the classic textbook manifestations in any one case. When the physician is in doubt and has only the findings of fever and headache in a seriously ill patient who resides in a wooded area, the decision should be made to collect proper specimens for blood count and serologic reactions and to begin treatment with either chloramphenicol or tetracycline. This is in a severely ill patient. Any such patient should be observed carefully and without reliance upon a telephone conversation.

In the preceding article, Garg and Blass describe a case of RMSF with mention of cerebritis and pneumonitis as manifestations. There is a considerable wealth of available information on the acute and later aspects of CNS involvement particularly in RMSF and epidemic typhus fever. The vasculitis associated with these two major rickettsioses causes a specific and very treatable form of encephalitis. When the diagnosis of RMSF is suspected, proper treatment should be initiated immediately. Pneumonitis with the presence of tachypnea, cyanosis, and the presence of pulmonary rales is attributable to a rickettsial form of bronchiolitis. In either condition, rickettsial encephalitis or bronchiolitis, the responsible physician must avoid the excess and promiscuous use of intravenously administered fluids as supportive care. Because of the vasculitis, there is increased capillary permeability; excess fluids will lead to overloading of these two organ systems with consequent additional edema of the brain and lungs. Careful supportive care is essential for treatment of critically ill patients. The addition of prompt specific antibiotic treatment usually leads to cure.

In the United States, the death rate of RMSF is about 7 percent. Most of the fatalities are due to a delay in making diagnosis and in institution of specific treatment. In some patients with a short incubation period following a tick bite, the clinical course is fulminant with death as early as five or six days after onset. This is why the physician must make an early judgment of the patient despite absence of a tick bite. Approximately 30 percent of patients may have no history of a tick bite. Under no circumstances should the physician wait for the laboratory tests to become positive. By this time the patient may be in a coma since the antibody response comes usually during the second week of illness. Hence, the physician must make a decision and that judgment must be based on the history including the epidemiologic features and early clinical manifestations.

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Abdominal Pregnancy: Mother and Infant Survival

PHILLIP J. GOLDSTEIN MD

Of all forms of ectopic pregnancy, abdominal pregnancy presents the physician with the greatest challenge. Not only is the condition rare, reducing the physician's index of suspicion, but also it is the most lethal to mother and child. This case of abdominal pregnancy resulted in a live-born term infant. The mother, seen on several occasions, had both abdominal x-rays and ultrasonograms. Neither, even in retrospect, showed the pathological condition.

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Tubal pregnancy, the most common form of ectopic, occurs at the rate of one per hundred deliveries, but abdominal pregnancies are noted between 1 per 3,372 and 1 per 7,931.[1] Living term births of abdominal pregnancies are even more rare. In the following case both mother and child survived and were doing well six months later.

Case Report

The patient was admitted to Sinai Hospital with the chief complaint of intermittent abdominal pain. She was known to be a chronic, undifferentiated schizophrenic who was at 40 weeks gestation both by ultrasound and by menstrual dates. Her prenatal course had been complicated by two episodes of recurring abdominal pain: one at approximately 14 weeks gestation, when she was seen in the Emergency Room; and one at approximately 28 weeks gestation, when she was admitted to the hospital. At both times she had serial sonograms. At her Emergency Room visit she also had abdominal x-rays to rule out other explanations for her abdominal pain, which occasionally was accompanied by nausea and vomiting. No gastrointestinal abnormality had been noted, and normal fetal and placental morphology was described.

At the time of her admission the patient was taking no drugs, although at various times during her pregnancy she had taken tricyclic antidepressants together with phenothiazine derivatives.

The vital signs revealed a BP of 170/108, pulse of 90, temperature of 35.2°C. Significant physical findings included an abdominal exam with some diffuse tenderness without localizing signs. No rebound was appreciated. Bowel sounds were active. Additional physical findings included a heart murmur that was 2/6 without thrills or cardiomegaly. The cervix seemed to be uneffaced and was located just under the pubic symphysis. The fetal presenting part was floating and thought to be vertex. No cervical dilatation and no evidence of amniotic fluid were noted. There was no vaginal bleeding nor cervical lesions. The estimated fetal weight was 3500 grams, and the fundal height was measured at 36 cm. Significant laboratory data included albuminuria of 1+, blood type of A+ with a "clinically insignificant" antibody, and the RPR was nonreactive. Hematocrit was 35.8, WBC was 9600, and there was no white blood cell shift. Electrolytes were all within normal limits. Other tests: BUN 11, creatinine 0.8, LDH 147, uric acid 4.8, fibrinogen 340, PT and PTT within normal limits. Platelets were reported at greater than 200,000.

When an ultrasound was performed in the labor room, the sonographer was "puzzled by the lack of amniotic fluid." A vertex presentation was noted without anomalies. An external fetal monitor was placed on the patient's abdomen, and intravenous fluids of 5 percent dextrose and lactated Ringers were begun. Frequent fetal heart rate decelerations were noted, and contractions were "difficult to appreciate." There was no change in the cervix. After admission the blood pressure gradually fell to 140/90 where it stabilized. No hyperreflexia was noted. Preeclamptic antihypertensive and anticonvulsant therapy was, therefore, not instituted.

Four hours after admission fetal bradycardia occurred to 60 BPM. The event lasted 4 minutes, and an emergency cesarean section was scheduled with the diagnosis of "fetal distress." General anesthesia was instituted, and the abdomen was opened through a transverse suprapubic incision because the heart rate had resumed a normal configuration following the acute bradycardia. As the peritoneum was incised, meconium was noted to ooze through the incision. Senior consultation was immediately sought, and a vertical abdominal incision was made to form a "T". A live-born female child was extracted by double footling breech with Apgar scores of 2 at one minute and 6 at five minutes. No amniotic fluid was noted, although the child was wrapped in meconium stained membranes.

At the time the fetus was delivered the placenta was noted to have only filmy adhesions to bowel but to be densely adherent to the left tube, broad ligament, and incorporated the ovary. No uterine rupture site was identified. The left tube and ovary were removed *en bloc* with the placenta after easily teasing some of the placenta off of the sigmoid colon. There was no evidence of invasion of the placenta into bowel serosa. There was no excessive bleeding in the area where the definitive surgery was conducted.

The patient had an uneventful postoperative course and received no blood. She was placed on prophylactic antibiotics, never became febrile, and the antibiotics were not continued after delivery.

Initial umbilical cord pH was 7.32 with a PO_2 of 48, and base deficit of 2. Cord blood glucose was 130, hematocrit was 52%, and bilirubin was 0.8. The infant was treated with intravenous fluids and respiratory support, never requiring intubation. Although there was early suspicion of mild meconium aspiration syndrome, the pulmonary pathology resolved prior to discharge. A flowing systolic murmur was heard initially but disappeared during the 10 days of her hospital course.

At age six months the child was doing well. The mother was seen on two occasions and voiced no complaints or complications.

Discussion

Abdominal pregnancy constitutes about 1 percent of all ectopic pregnancies and is likely the result of tubal abortion with subsequent trophoblastic implantation. Pregnancies have been reported in the spleen, the liver, and even after hysterectomy.[1]

The maternal mortality from abdominal pregnancy morbidity is reported as being very high, ranging from 6 percent to 14.5 percent. A summary of several review articles reveals a maternal mortality of 5 percent (2/41) and a perinatal mortality rate of 78 percent (32/41).[2–4] These data are confusing because the populations have very different socioeconomic, racial, and health care availability characteristics. The data also are hampered by failure to clearly separate nonviable gestations with early diagnosis from potentially viable fetuses and late pregnancy diagnosis.

A few important characteristics, some exemplified by this report, deserve mention. Although this patient was nulligravid, abdominal pregnancy occurs more commonly in multiparous patients. Abdominal pain is common, especially with fetal movement, as occurred in this case, and was noted in 100 percent of Rahman's[3] and Delke's[4] cases and in 95 percent of Hallatt's[2] cases. Nausea and vomiting are very common, and vaginal bleeding may be reported. For instance, Hallatt reported that 14 of 21 cases had bleeding in pregnancy.[2] The endometrium will develop a lush decidua with stimulation due to placental estrogen and progesterone production. This tissue may shed at any time.

"Uterine contractions" were not perceived with monitoring in this case. A diagnostic test proposed by Cross suggests the use of oxytocin in an attempt to stimulate contractions where abdominal pregnancy is suspected.[5] Orr, however, reported a "normal" oxytocin challenge test on two occasions in an abdominal pregnancy.[6]

Despite several ultrasounds, the diagnosis of abdominal pregnancy was not made. Even in retrospect when the hard copies were reviewed, the evidence was not clear. That our experience is not unique is confirmed by Ali *et al.*[7]

Once the diagnosis is made, the proper management is prompt delivery. The great risk of intraabdominal hemorrhage and infection in cases of abdominal pregnancy is not reduced by delay, for example by waiting for fetal demise in the second trimester.[1]

Large amounts of blood should be available once the diagnosis is made. The Mast suit for lower abdominal compression has been used in severe hemorrhage and has been suggested as a possibility in postoperative care.[8] If the diagnosis is made preoperatively, central venous lines should be placed prior to surgery.

Placenta

A controversy persists about management of the placenta. This case was effectively managed by sharp dissection of filmy adhesions to bowel followed by *en bloc* dissection of the left adnexa. The removal of the placenta under less favorable implantation can be lethal. Attempts to remove the placenta must take into consideration the other organs involved. There is no effective approach to control of bleeding in the placental bed by clamping or cautery. Considerable damage to the bowel and other viscera can occur over and above placental bed hemorrhage. The classical teaching has been to leave the placenta *in situ.*

On the other hand, the retained placenta is not an innocuous organ. Infection, abscess formation, and intestinal obstruction are possibilities. As a consequence, nonsurgical approaches to destroying the remaining trophoblast have been considered. One well-tested drug of choice for chemotherapy against trophoblastic tumors is methotrexate. It is therefore reasonable to assume that methotrexate would rapidly shrink an *in situ* placenta in an abdominal pregnancy. Rahman used methotrexate in five cases, giving 100 mgms/day for five days, and repeating the regimen two or three times. He based his therapy on the experience of three case reports, the first published in 1965.[9–11] Although Rahman's five patients had prompt resolution of their gonadotropin titers, he noted that the increased amount of necrotic material created by the trophoblastic destruction frequently led to sepsis and intestinal obstruction. He, therefore, did not recommend its use.

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Private Duty and Home Nursing Care

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J-6138 January 1986


There's never been
a better time for her...
and
PREMARIN®
(Conjugated Estrogens Tablets)

Now the evidence looks better than ever

Significantly reduced risk of endometrial hyperplasia

Endometrial hyperplasia was significantly reduced when progestin was added to PREMARIN therapy for more than ten days a month.[1-4] The risk of endometrial hyperplasia may also be reduced through cyclic administration of unopposed, low-dose PREMARIN.

Effect on lipids—an important feature

PREMARIN used alone does not adversely affect lipid levels. In fact, a clinical study has shown a significant increase in HDL cholesterol—from 49.7 mg/dL to 56.4 mg/dL—and decrease in LDL cholesterol—from 165.1 mg/dL to 138.1 mg/dL—after one year of therapy with PREMARIN, 0.625 mg.[5]

Low-dose control of menopausal symptoms*

PREMARIN effectively relieves vasomotor symptoms, such as hot flashes. When estrogen deficiency is limited to atrophic vaginitis, PREMARIN® (conjugated estrogens) Vaginal Cream restores the vaginal environment to its premenopausal state.

The most widely used, most extensively studied estrogen worldwide.

PREMARIN®
(Conjugated Estrogens Tablets)

Most trusted for more reasons

*PREMARIN is indicated for moderate-to-severe vasomotor symptoms.

Please see following page for brief summary of prescribing information.

For moderate-to-severe vasomotor symptoms

PREMARIN®
(Conjugated Estrogens Tablets)



0.3 mg 0.625 mg 0.9 mg 1.25 mg 2.5 mg

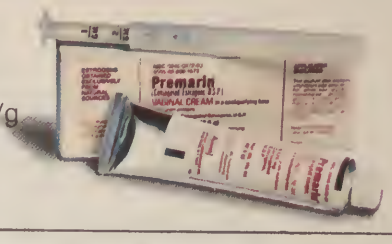
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For atrophic vaginitis

PREMARIN®
(Conjugated Estrogens)

Vaginal Cream

0.625mg/g



BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION AND PATIENT INFORMATION, SEE PACKAGE CIRCULARS.)*

PREMARIN® Brand of conjugated estrogens tablets, USP
PREMARIN® Brand of conjugated estrogens Vaginal Cream in a nonliquefying base

1. ESTROGENS HAVE BEEN REPORTED TO INCREASE THE RISK OF ENDOMETRIAL CARCINOMA.

Three independent case control studies have reported an increased risk of endometrial cancer in postmenopausal women exposed to exogenous estrogens for more than one year. This risk was independent of the other known risk factors for endometrial cancer. These studies are further supported by the finding that incidence rates of endometrial cancer have increased sharply since 1969 in eight different areas of the United States with population-based cancer reporting systems, an increase which may be related to the rapidly expanding use of estrogens during the last decade. The three case control studies reported that the risk of endometrial cancer in estrogen users was about 4.5 to 13.9 times greater than in nonusers. The risk appears to depend on both duration of treatment and on estrogen dose. In view of these findings, when estrogens are used for the treatment of menopausal symptoms, the lowest dose that will control symptoms should be utilized and medication should be discontinued as soon as possible. When prolonged treatment is medically indicated, the patient should be reassessed on at least a semiannual basis to determine the need for continued therapy. Although the evidence must be considered preliminary, one study suggests that cyclic administration of low doses of estrogen may carry less risk than continuous administration; it therefore appears prudent to utilize such a regimen. Close clinical surveillance of all women taking estrogens is important. In all cases of undiagnosed persistent or recurring abnormal vaginal bleeding, adequate diagnostic measures should be undertaken to rule out malignancy. There is no evidence at present that "natural" estrogens are more or less hazardous than "synthetic" estrogens at equiestrogenic doses.

2. ESTROGENS SHOULO NOT BE USED OURING PREGNANCY.

The use of female sex hormones, both estrogens and progestogens, during early pregnancy may seriously damage the offspring. It has been shown that females exposed in utero to diethylstilbestrol, a non-steroidal estrogen, have an increased risk of developing in later life a form of vaginal or cervical cancer that is ordinarily extremely rare. This risk has been estimated as not greater than 4 per 1,000 exposures. Furthermore, a high percentage of such exposed women (from 30% to 90%) have been found to have vaginal adenosis, epithelial changes of the vagina and cervix. Although these changes are histologically benign, it is not known whether they are precursors of malignancy. Although similar data are not available with the use of other estrogens, it cannot be presumed they would not induce similar changes. Several reports suggest an association between intrauterine exposure to female sex hormones and congenital anomalies, including congenital heart defects and limb reduction defects. One case control study estimated a 4.7-fold increased risk of limb reduction defects in infants exposed in utero to sex hormones (oral contraceptives, hormone withdrawal tests for pregnancy, or attempted treatment for threatened abortion). Some of these exposures were very short and involved only a few days of treatment. The data suggest that the risk of limb reduction defects in exposed fetuses is somewhat less than 1 per 1,000. In the past, female sex hormones have been used during pregnancy in an attempt to treat threatened or habitual abortion. There is considerable evidence that estrogens are ineffective for these indications, and there is no evidence from well controlled studies that progestogens are effective for these uses. If PREMARIN is used during pregnancy, or if the patient becomes pregnant while taking this drug, she should be apprised of the potential risks to the fetus, and the advisability of pregnancy continuation.

DESCRIPTION: PREMARIN (conjugated estrogens, USP) contains a mixture of estrogens, obtained exclusively from natural sources, blended to represent the average composition of material derived from pregnant mares' urine. It contains estrone, equilin, and 17α-dihydroequilin, together with smaller amounts of 17α-estradiol, equilenin, and 17α-dihydroequilenin as salts of their sulfate esters. Tablets are available in 0.3 mg, 0.625 mg, 0.9 mg, 1.25 mg, and 2.5 mg strengths of conjugated estrogens. Cream is available as 0.625 mg conjugated estrogens per gram.

INDICATIONS AND USAGE: PREMARIN (conjugated estrogens tablets, USP): Moderate-to-severe *vasomotor* symptoms associated with the menopause. (There is no evidence that estrogens are effective for nervous symptoms or depression without associated vasomotor symptoms and they should not be used to treat such conditions.) **Osteoporosis (abnormally low bone mass).** Atrophic vaginitis. Kraurosis vulvae. Female castration.

PREMARIN (conjugated estrogens) Vaginal Cream is indicated in the treatment of atrophic vaginitis and kraurosis vulvae. PREMARIN HAS NOT BEEN SHOWN TO BE EFFECTIVE FOR ANY PURPOSE OURING PREGNANCY ANO ITS USE MAY CAUSE SEVERE HARM TO THE FETUS (SEE BOXEO WARNING).

Concomitant Progestin Use: The lowest effective dose appropriate for the specific indication should be utilized. Studies of the addition of a progestin for 7 or more days of a cycle of estrogen administration have reported a lowered incidence of endometrial hyperplasia. Morphological and biochemical studies of the endometrium suggest that 10 to 13 days of progestin are needed to provide maximal maturation of the endometrium and to eliminate any hyperplastic changes. Whether this will provide protection from endometrial carcinoma has not been clearly established. There are possible additional risks which may be associated with the inclusion of progestin in estrogen replacement regimens. (See PRECAUTIONS.) The choice of progestin and dosage may be important; product labeling should be reviewed to minimize possible adverse effects.

CONTRAINDICATIONS: Estrogens should not be used in women (or men) with any of the following conditions: 1. Known or suspected cancer of the breast except in appropriately selected patients being treated for metastatic disease. 2. Known or suspected estrogen-dependent neoplasia. 3. Known or suspected pregnancy (See Boxed Warning). 4. Undiagnosed abnormal genital bleeding. 5. Active thrombophlebitis or thromboembolic disorders. 6. A past history of thrombophlebitis, thrombosis, or thromboembolic disorders associated with previous estrogen use (except when used in treatment of breast or prostatic malignancy).

WARNINGS: Long-term continuous administration of natural and synthetic estrogens in certain animal species increases the frequency of carcinomas of the breast, cervix, vagina, and liver. There are now reports that estrogens increase the risk of carcinoma of the endometrium in humans. (See Boxed Warning.) At the present time there is no satisfactory evidence that estrogens given to postmenopausal women increase the risk of cancer of the breast, although a recent study has raised this possibility. There is a need for caution in prescribing estrogens for women with a strong family history of breast cancer or who have breast nodules, fibrocystic disease, or abnormal mammograms. A recent study has reported a 2- to 3-fold increase in the risk of surgically confirmed gallbladder disease in women receiving postmenopausal estrogens.

Adverse effects of oral contraceptives may be expected at the larger doses of estrogen used to treat prostatic or breast cancer or postpartum breast engorgement; it has been shown that there is an increased risk of thrombosis in men receiving estrogens for prostatic cancer and women for postpartum breast engorgement. Users of oral contraceptives have an increased risk of diseases, such as thrombophlebitis, pulmonary embolism, stroke, and myocardial infarction. Cases of retinal thrombosis, mesenteric thrombosis, and optic neuritis have been reported in oral contraceptive users. An increased risk of postsurgery thromboembolic complications has also been reported in users of oral contraceptives. If feasible, estrogen should be discontinued at least 4 weeks before surgery of the type associated with an increased risk of thromboembolism, or during periods of prolonged immobilization. Estrogens should not be used in persons with active thrombophlebitis, thromboembolic disorders, or in persons with a history of such disorders in association with estrogen use. They should be used with caution in patients with cerebral vascular or coronary artery disease. Large doses (5 mg conjugated estrogens per day), comparable to those used to treat cancer of the prostate and breast, have been shown to increase the risk of nonfatal myocardial infarction, pulmonary embolism and thrombophlebitis. When doses of this size are used, any of the thromboembolic and thrombotic adverse effects should be considered a clear risk.

Benign hepatic adenomas should be considered in estrogen users having abdominal pain and tenderness, abdominal mass, or hypovolemic shock. Hepatocellular carcinoma has been reported in women taking estrogen-containing oral contraceptives. Increased blood pressure may occur with use of estrogens in the menopause and blood pressure should be monitored with estrogen use. A worsening of glucose tolerance has been observed in patients on estrogen-containing oral contraceptives. For this reason, diabetic patients should be carefully observed. Estrogens may lead to severe hypercalcemia in patients with breast cancer and bone metastases.

PRECAUTIONS: Physical examination and a complete medical and family history should be taken prior to the initiation of any estrogen therapy with special reference to blood pressure, breasts, abdomen, and pelvic organs, and should include a Papanicolaou smear. As a general rule, estrogen should not be prescribed for longer than one year without another physical examination being performed. Conditions influenced by fluid retention such as asthma, epilepsy, migraine, and cardiac or renal dysfunction, require careful observation. Certain patients may develop manifestations of excessive estrogenic stimulation, such as abnormal or excessive uterine bleeding, mastodynia, etc. Prolonged administration of unopposed estrogen therapy has been reported to increase the risk of endometrial hyperplasia in some patients. Oral contraceptives appear to be associated with an increased incidence of mental depression. Patients with a history of depression should be carefully observed. Preexisting uterine leiomyomata may increase in size during estrogen use. The pathologist should be advised of estrogen therapy when relevant specimens are submitted. If jaundice develops in any patient receiving estrogen, the medication should be discontinued while the cause is investigated. Estrogens should be used with care in patients with impaired liver function, renal insufficiency, metabolic bone diseases associated with hypercalcemia, or in young patients in whom bone growth is not complete. If concomitant progestin therapy is used, potential risks may include adverse effects on carbohydrate and lipid metabolism.

The following changes may be expected with larger doses of estrogen:

a. Increased sulfobromophthalein retention.

b. Increased prothrombin and factors VII, VIII, IX, and X; decreased antithrombin 3; increased norepinephrine-induced platelet aggregability.

c. Increased thyroid binding globulin (TBG) leading to increased circulating total thyroid hormone, as measured by PBI, T4 by column, or T4 by radioimmunoassay. Free T3 resin uptake is decreased, reflecting the elevated TBG; free T4 concentration is unaltered.

d. Impaired glucose tolerance.

e. Decreased pregnanediol excretion.

f. Reduced response to metyrapone test.

g. Reduced serum folate concentration.

h. Increased serum triglyceride and phospholipid concentration. As a general principle, the administration of any drug to nursing mothers should be done only when clearly necessary since many drugs are excreted in human milk.

ADVERSE REACTIONS: The following have been reported with estrogenic therapy, including oral contraceptives: breakthrough bleeding, spotting, change in menstrual flow; dysmenorrhea; premenstrual-like syndrome; amenorrhea during and after treatment; increase in size of uterine fibromyomata; vaginal candidiasis, change in cervical erosion and in degree of cervical secretion; cystitis-like syndrome; tenderness, enlargement, secretion (of breasts); nausea, vomiting, abdominal cramps, bloating; cholestatic jaundice; chloasma or melasma which may persist when drug is discontinued; erythema multiforme; erythema nodosum; hemorrhagic eruption; loss of scalp hair; hirsutism; steepening of corneal curvature; intolerance to contact lenses; headache, migraine, dizziness, mental depression, chorea; increase or decrease in weight; reduced carbohydrate tolerance; aggravation of porphyria; edema; changes in libido.

ACUTE OVERDOSAGE: May cause nausea, and withdrawal bleeding may occur in females.

DOSAGE AND ADMINISTRATION:

PREMARIN® Brand of conjugated estrogens tablets, USP

1. *Given cyclically for short-term use only.* For treatment of moderate to severe *vasomotor* symptoms, atrophic vaginitis, or kraurosis vulvae associated with the menopause (0.3 to 1.25 mg or more daily). The lowest dose that will control symptoms should be chosen and medication should be discontinued as promptly as possible. Administration should be cyclic (eg, three weeks on and one week off). Attempts to discontinue or taper medication should be made at three- to six-month intervals.

2. *Given cyclically:* Female castration. Osteoporosis. Female castration—1.25 mg daily, cyclically. Adjust upward or downward according to response of the patient. For maintenance, adjust dosage to lowest level that will provide effective control. Osteoporosis —0.625 mg daily. Administration should be cyclic (eg, three weeks on and one week off).

Patients with an intact uterus should be monitored for signs of endometrial cancer and appropriate measures taken to rule out malignancy in the event of persistent or recurring abnormal vaginal bleeding.

PREMARIN® Brand of conjugated estrogens Vaginal Cream

Given cyclically for short-term use only. For treatment of atrophic vaginitis or kraurosis vulvae.

The lowest dose that will control symptoms should be chosen and medication should be discontinued as promptly as possible.

Administration should be cyclic (eg, three weeks on and one week off).

Attempts to discontinue or taper medication should be made at three-to-six month intervals.

Usual dosage range: 2 to 4 g daily, intravaginally, depending on the severity of the condition.

Treated patients with an intact uterus should be monitored closely for signs of endometrial cancer and appropriate diagnostic measures should be taken to rule out malignancy in the event of persistent or recurring abnormal vaginal bleeding.

References:

1. Whitehead MI, Townsend PT, Pryse-Oavies J, et al: Effects of estrogens and progestins on the biochemistry and morphology of the postmenopausal endometrium. *N Engl J Med* 1981;305:1599-1605 2. Paterson MEL, Wade-Evans T, Sturdee DW, et al: Endometrial disease after treatment with oestrogens and progestogens in the climacteric. *Br Med J* 1980;280:822-824. 3. Magos AL, Brincat M, Studd JWW, et al: Amenorrhea and endometrial atrophy with continuous oral estrogen and progestogen therapy in postmenopausal women. *Obstet Gynecol* 1985; 67: 496-499. 4. Whitehead MI, Lane G, Siddle N, et al: Avoidance of endometrial hyperstimulation in estrogen-treated postmenopausal women. *Semin Reprod Endocrinol* 1983;1:1;41-52. 5. Barnes RB, Roy S, Lobo RA: Comparison of lipid and androgen levels after conjugated estrogen or depo-medroxyprogesterone acetate treatment in postmenopausal women. *Obstet Gynecol* 1985;66:216-219.

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ZOVIRAX®
(acyclovir)
CAPSULES

Prevent genital herpes recurrences month after month with daily therapy.

(In controlled studies, recurrences were totally prevented for 4 to 6 months in up to 75% of patients.)

Please see last page of this advertisement for brief summary of prescribing information.

ZOVIRAX® (acyclovir) CAPSULES

Help free your patients from recurrences.

Daily therapy

Coping with genital herpes is rarely easy. For some, the worst part is the pain and discomfort of frequent attacks—month after month, year after year. For others, the emotional burden presents a more difficult problem, leading to social isolation, anxiety, and diminished self-esteem.

Prevent or reduce recurrences

Although your patients have to live with herpes, they shouldn't have to suffer. Daily therapy with ZOVIRAX CAPSULES can help free them from the cycle of recurrent genital herpes. For many, one capsule three times a day can suppress recurrences completely while on therapy.

Generally well tolerated

Daily therapy with ZOVIRAX CAPSULES is generally well tolerated. The most frequent adverse reactions reported during clinical trials were headache, diarrhea, nausea/vomiting, vertigo, and arthralgia.

The physical and emotional difficulties posed by genital herpes are unique for each patient. The frequency and severity of recurrent episodes, as well as the emotional impact of the disease, should be considered when selecting daily therapy with ZOVIRAX CAPSULES.

Please see brief summary of prescribing information on next page.



Prevent recurrences month after month*

ZOVIRAX® (acyclovir) CAPSULES

Brief Summary

INDICATIONS AND USAGE: Zovirax Capsules are indicated for the treatment of initial episodes and the management of recurrent episodes of genital herpes in certain patients.

The severity of disease is variable depending upon the immune status of the patient, the frequency and duration of episodes, and the degree of cutaneous or systemic involvement. These factors should determine patient management, which may include symptomatic support and counseling only, or the institution of specific therapy. The physical, emotional and psychosocial difficulties posed by herpes infections as well as the degree of debilitation, particularly in immunocompromised patients, are unique for each patient, and the physician should determine therapeutic alternatives based on his or her understanding of the individual patient's needs. Thus Zovirax Capsules are not appropriate in treating all genital herpes infections. The following guidelines may be useful in weighing the benefit/risk considerations in specific disease categories:

First Episodes (primary and nonprimary infections — commonly known as initial genital herpes):

Double-blind, placebo-controlled studies have demonstrated that orally administered Zovirax significantly reduced the duration of acute infection (detection of virus in lesions by tissue culture) and lesion healing. The duration of pain and new lesion formation was decreased in some patient groups. The promptness of initiation of therapy and/or the patient's prior exposure to Herpes simplex virus may influence the degree of benefit from therapy. Patients with mild disease may derive less benefit than those with more severe episodes. In patients with extremely severe episodes, in which prostration, central nervous system involvement, urinary retention or inability to take oral medication require hospitalization and more aggressive management, therapy may be best initiated with intravenous Zovirax.

Recurrent Episodes:

Double-blind, placebo-controlled studies in patients with frequent recurrences (6 or more episodes per year) have shown that Zovirax Capsules given for 4 to 6 months prevented or reduced the frequency and/or severity of recurrences in greater than 95% of patients. Clinical recurrences were prevented in 40 to 75% of patients. Some patients experienced increased severity of the first episode following cessation of therapy; the severity of subsequent episodes and the effect on the natural history of the disease are still under study.

The safety and efficacy of orally administered acyclovir in the suppression of frequent episodes of genital herpes have been established only for up to 6 months. Chronic suppressive therapy is most appropriate when, in the judgement of the physician, the benefits of such a regimen outweigh known or potential adverse effects. In general, Zovirax Capsules should not be used for the suppression of recurrent disease in mildly affected patients. Unanswered questions concerning the human relevance of *in vitro* mutagenicity studies and reproductive toxicity studies in animals given very high doses of acyclovir for short periods (see Carcinogenesis, Mutagenesis, Impairment of Fertility) should be borne in mind when designing long-term management for individual patients. Discussion of these issues with patients will provide them the opportunity to weigh the potential for toxicity against the severity of their disease. Thus, this regimen should be considered only for appropriate patients and only for six months until the results of ongoing studies allow a more precise evaluation of the benefit/risk assessment of prolonged therapy.

Limited studies have shown that there are certain patients for whom intermittent short-term treatment of recurrent episodes is effective. This approach may be more appropriate than a suppressive regimen in patients with infrequent recurrences.

Immunocompromised patients with recurrent herpes infections can be treated with either intermittent or chronic suppressive therapy. Clinically significant resistance, although rare, is more likely to be seen with prolonged or repeated therapy in severely immunocompromised patients with active lesions.

CONTRAINDICATIONS: Zovirax Capsules are contraindicated for patients who develop hypersensitivity or intolerance to the components of the formulation.

WARNINGS: Zovirax Capsules are intended for oral ingestion only.

PRECAUTIONS: General: Zovirax has caused decreased spermatogenesis at high doses in some animals and mutagenesis in some acute studies at high concentrations of drug (see PRECAUTIONS — Carcinogenesis, Mutagenesis, Impairment of Fertility). The recommended dosage and length of treatment should not be exceeded (see DOSAGE AND ADMINISTRATION).

Exposure of Herpes simplex isolates to acyclovir *in vitro* can lead to the emergence of less sensitive viruses. The possibility of the appearance of less sensitive viruses in man must be borne in mind when treating patients. The relationship between the *in vitro* sensitivity of Herpes simplex virus to acyclovir and clinical response to therapy has yet to be established.

Because of the possibility that less sensitive virus may be selected in patients who are receiving acyclovir, all patients should be advised to take particular care to avoid potential transmission of virus if active lesions are present while they are on therapy. In severely immunocompromised patients, the physician should be aware that prolonged or repeated courses of acyclovir may result in selection of resistant viruses which may not fully respond to continued acyclovir therapy.

Drug Interactions: Co-administration of probenecid with intravenous acyclovir has been shown to increase the mean half-life and the area under the concentration-time curve. Urinary excretion and renal clearance were correspondingly reduced.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Acyclovir was tested in lifetime bioassays in rats and mice at single daily doses of 50, 150 and 450 mg/kg given by gavage. There was no statistically significant difference in the incidence of tumors between treated and control animals, nor did acyclovir shorten the latency of tumors. In 2 *in vitro* cell transformation assays, used to provide preliminary assessment of potential oncogenicity in advance of these more definitive life-time bioassays in rodents, conflicting results were obtained. Acyclovir was positive at the highest dose used in one system and the resulting morphologically transformed cells formed tumors when inoculated into immunosuppressed, syngeneic, weanling mice. Acyclovir was negative in another transformation system considered less sensitive.

In acute studies, there was an increase, not statistically significant, in the incidence of chromosomal damage at maximum tolerated parenteral doses of 100 mg/kg acyclovir in rats but not Chinese hamsters; higher doses of 500 and 1000 mg/kg were clastogenic in Chinese hamsters. In addition, no activity was found after 5 days dosing in a dominant lethal study in mice. In 6 of 11 microbial and mammalian cell assays, no evidence of mutagenicity was observed. At 3 loci in a Chinese hamster ovary cell line, the results were inconclusive. In 2 mammalian cell assays (human lymphocytes and L5178Y mouse lymphoma cells *in vitro*), positive responses for mutagenicity and chromosomal damage occurred, but only at concentrations at least 400 times the acyclovir plasma levels achieved in man.

Acyclovir has not been shown to impair fertility or reproduction in mice (450 mg/kg/day, p.o.) or in rats (25 mg/kg/day, s.c.). At 50 mg/kg/day s.c. in the rat, there was a statistically significant increase in post-implantation loss, but no concomitant decrease in litter size. In female rabbits treated subcutaneously with acyclovir subsequent to mating, there was a statistically significant decrease in implantation efficiency but no concomitant decrease in litter size at a dose of 50 mg/kg/day. No effect upon implantation efficiency was observed when the same dose was administered intravenously. In a rat peri- and postnatal study at 50 mg/kg/day s.c., there was a statistically significant decrease in the group mean numbers of corpora lutea, total implantation sites and live fetuses in the F_1 generation. Although not statistically significant, there was also a dose related decrease in group mean numbers of live fetuses and implantation sites at 12.5 mg/kg/day and 25 mg/kg/day, s.c. The intravenous administration of 100 mg/kg/day, a dose known to cause obstructive nephropathy in rabbits, caused a significant increase in fetal resorptions and a corresponding decrease in litter size. However, at a maximum tolerated intravenous dose of 50 mg/kg/day in rabbits, there were no drug-related reproductive effects.

Intraperitoneal doses of 320 or 80 mg/kg/day acyclovir given to rats for 1 and 6 months, respectively, caused testicular atrophy. Testicular atrophy was persistent through the 4-week postdose recovery phase after 320 mg/kg/day; some evidence of recovery of sperm production was evident 30 days postdose. Intravenous doses of 100 and 200 mg/kg/day acyclovir given to dogs for 31 days caused aspermatogenesis. Testicles were normal in dogs given 50 mg/kg/day, i.v. for one month.

Pregnancy: ***Teratogenic Effects:*** Pregnancy Category C. Acyclovir was not teratogenic in the mouse (450 mg/kg/day, p.o.), rat (50 mg/kg/day, s.c.) or rabbit (50 mg/kg/day, s.c. and i.v.). There are no adequate and well-controlled studies in pregnant women. Acyclovir should not be used during pregnancy unless the potential benefit justifies the potential risk to the fetus. Although acyclovir was not teratogenic in animal studies, the drug's potential for causing chromosome breaks at high concentration should be taken into consideration in making this determination.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when Zovirax is administered to a nursing woman. In nursing mothers, consideration should be given to not using acyclovir treatment or discontinuing breastfeeding.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS — Short-Term Administration: The most frequent adverse reactions reported during clinical trials were nausea and/or vomiting in 8 of 298 patient treatments (2.7%) and headache in 2 of 298 (0.6%). Less frequent adverse reactions, each of which occurred in 1 of 298 patient treatments (0.3%), included diarrhea, dizziness, anorexia, fatigue, edema, skin rash, leg pain, inguinal adenopathy, medication taste and sore throat.

Long-Term Administration: The most frequent adverse reactions reported in studies of daily therapy for 3 to 6 months were headache in 33 of 251 patients (13.1%), diarrhea in 22 of 251 (8.8%), nausea and/or vomiting in 20 of 251 (8.0%), vertigo in 9 of 251 (3.6%), and arthralgia in 9 of 251 (3.6%). Less frequent adverse reactions, each of which occurred in less than 3% of the 251 patients (see number of patients in parentheses), included skin rash (7), insomnia (4), fatigue (7), fever (4), palpitations (1), sore throat (2), superficial thrombophlebitis (1), muscle cramps (2), pars planitis (1), menstrual abnormality (4), acne (3), lymphadenopathy (2), irritability (1), accelerated hair loss (1), and depression (1).

DOSAGE AND ADMINISTRATION: Treatment of initial genital herpes: One 200 mg capsule every 4 hours, while awake, for a total of 5 capsules daily for 10 days (total 50 capsules).

Chronic suppressive therapy for recurrent disease: One 200 mg capsule 3 times daily for up to 6 months. Some patients may require more drug, up to one 200 mg capsule 5 times daily for up to 6 months.

Intermittent Therapy: One 200 mg capsule every 4 hours, while awake, for a total of 5 capsules daily for 5 days (total 25 capsules). Therapy should be initiated at the earliest sign or symptom (prodrome) of recurrence.

Patients With Acute or Chronic Renal Impairment: One 200 mg capsule every 12 hours is recommended for patients with creatinine clearance ≤10 ml/min/1.73/m².

HOW SUPPLIED: Zovirax Capsules (blue, opaque) containing 200 mg acyclovir and printed with "Wellcome ZOVIRAX 200"- Bottles of 100 (NDC-0081-0991-55) and unit dose pack of 100 (NDC-0081-0991-56).

Store at 15°-30°C (59°-86°F) and protect from light.

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*In controlled studies, recurrences were totally prevented for 4 to 6 months in up to 75% of patients.

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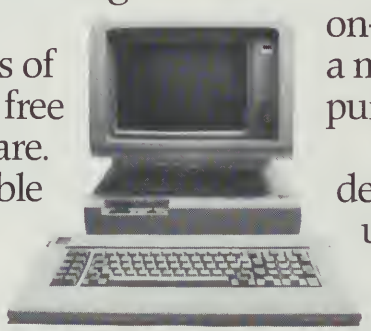
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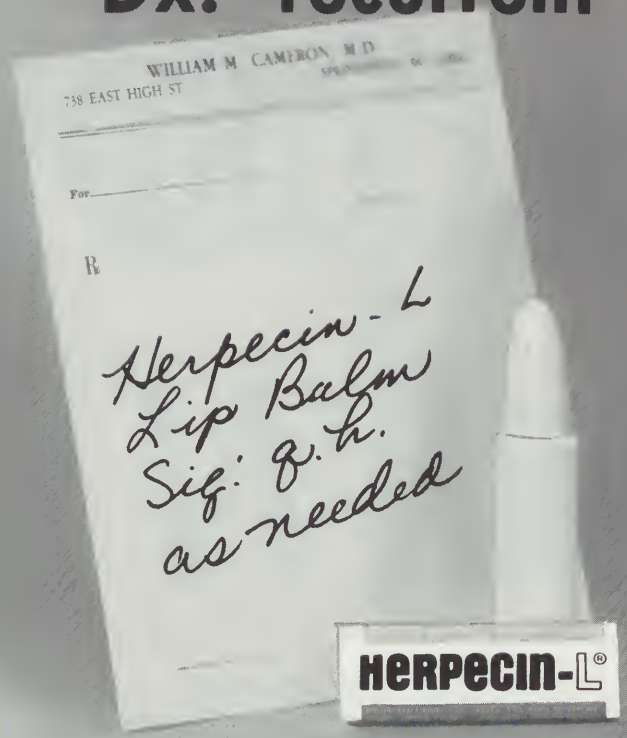
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Doctor, now that I have an instrument for self-monitoring of blood glucose that I use two to four times a day, is there any reason to keep my tablets for testing urine sugar and my ketostix for ketone testing?

Blood glucose testing is the preferred method of monitoring the control of diabetes for insulin dependent (Type I) and noninsulin dependent (Type II) patients. It should be done at least two to four times daily depending on the degree of control one is striving for and the "brittleness" of the diabetes.

Urine testing has problems:

1. Many long-term patients have a high threshold (spilling point) for urine glucose.
2. Difficulty in collecting an accurate double-voided specimen for testing.
3. Having a neurogenic bladder, prostatic hypertrophy with some bladder neck stenosis, cystocele, etc. makes accurate specimen collection difficult.
4. Urine test results are altered by proteinuria, use of antibiotics and other medications, which make the test result unreliable.
5. A "negative" is not helpful in a person prone to having hypoglycemia.

In recent years strip tests for glucose and ketones have replaced older methods because of their convenience. There are a few occasions where urine testing for glucose might still be useful.

1. In those patients who refuse to perform the blood monitoring routine.
2. In those who cannot afford the cost. Urine test strips cost about ⅙ the amount of blood glucose strips.

Ketone testing should be done whenever the urine glucose test is 2 percent or more, or the blood glucose 220 mg/dl. If one is following a weight-loss diet and ketones are present in the absence of glucosuria, it indicates that excess body fat is being burned off. If one is following a meal plan of adequate calories and ketonuria is present in the absence of glucosuria, probably the protein in the meal plan is excessive for the amount of carbohydrate; one needs to see the dietitian for a reevaluation of the balance of the plan. If both glucosuria and ketonuria are present it means that the body does not have enough insulin and is in a state of starvation.

In summary, there is a place for urine glucose testing in following the control of diabetes, but it is only as a compromise between self-monitoring of blood glucose and not testing at all.

Urine ketone testing should be done to obtain additional information to supplement self-monitoring of blood glucose when hyperglycemia is present (BG above 220 mg/dl).

***DeWITT E. DeLAWTER,* Editor**

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Epidermoid Carcinoma of the Anal Canal

Invasive squamous cell carcinoma of the anal canal is a rare tumor and was usually treated by abdominoperineal resection[1] or radiation therapy,[2] with a five-year survival of about 55 percent. Prophylactic or elective groin dissection has been abandoned as it does not seem to improve the survival. However, if the patient develops metastases to the groin lymph nodes, therapeutic lymphadenectomy is in order and has a five-year survival of about 40 percent.[3] Although there is no standardized TNM staging system in this disease, there are survival advantages that can be attributed to the negative status of the regional lymph nodes, the small size of the tumor especially the depth of the tumor invasion, to some extent an age of less than 60, and being female. The histological grading of the tumor also may play a prognostic role in this disease.[4] Preoperative irradiation may influence the outcome and survival, according to some reports.[3,5]

A growing number of reports indicate that preoperative multidisciplinary treatment produces a significant improvement in overall survival and in incidence of sphincteric preservation. This treatment consists of the administration of chemotherapy followed by radiation therapy as reported by Nigro *et al.*[6,7]: 5-Fluorouracil 750 mg/M^2/day intravenous infusion for 5 days and mitomycin-C, 10-15 mg/M^2 on day #1. This is followed sequentially by 3000 rad of external beam irradiation to the pelvis over 3 weeks.

Three to five weeks after the termination of radiation therapy, when patients undergo abdominoperineal resection, no residual tumors are found in a large number of cases. Therefore, it is justified to reexamine the patients three to five weeks post chemotherapy and irradiation, under general anesthesia. In the event of significant tumor shrinkage, the scar of the original biopsy is to be locally excised and examined microscopically for residual cancer. The absence of gross and microscopic cancer usually requires no further surgery to the primary tumor site. However, if residual tumor is detected, abdominoperineal resection is in order. The results of such an approach have a gratifying overall survival rate of 75 percent. Results also indicate that patients with smaller tumors of 2.5 cm or less do significantly better than those with larger tumors.[8]

In an attempt to improve these results, some investigators increased the amount of radiation therapy to 5000 rad in 20 fractions following the same chemotherapy.[9] At the University of Maryland, we have initiated a slightly different approach using preoperative concomitant consideration of radiation therapy and Bleomycin administered as 15 units, once/week intravenously only during the period of irradiation. The amount of radiation was 4500 rad. Of the first three patients treated, one sustained a severe skin reaction that necessitated withholding of irradiation for two weeks. After abdominoperineal resection, no residual tumors were found in any surgical specimens. However, because of the skin reactions, we are planning to reduce the irradiation to 3500 rad and the Bleomycin to 5 mg IV twice weekly.

If you have any questions, call or write the Surgical Oncology Program at the University of Maryland Medical Systems, Room N13E02, Baltimore, Maryland 21201 (301-328-5224).

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Area meetings and course announcements are listed each month under *Doctors Take Note*

PHYSICIAN PLACEMENT SERVICE

The Medical and Chirurgical Faculty of the State of Maryland maintains a Placement Service for the convenience of Maryland physicians, hospitals and communities in search of candidates for positions available in our state. A detailed description of such opportunities should be forwarded to the Physician Placement Service, 1211 Cathedral St., Baltimore, MD 21201; telephone 1-301-539-0872.

Physicians wishing to locate in Maryland are invited to submit a resumé to be kept on file with the Physician Placement Service. Candidates are requested to inform the Faculty when they are no longer available for consideration for opportunities which might be available in Maryland.

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Medical Miscellany

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• • •

Med-Chi's Media Awards

The Medical and Chirurgical Faculty of Maryland will be presenting its Second Annual Media Awards for excellence in medical journalism at its Annual Meeting on April 29, 1987 at the Omni International Hotel in Baltimore. These awards will honor journalism that contributes to a better public understanding of medicine and health in Maryland and Washington, DC.

This year the program will have five categories. Television, Radio, Magazines, Daily Newspapers, and Weekly, Bi-Weekly, and Semi-Weekly Newspapers. Only material that has been published or broadcast between January 1, 1986 and December 31, 1986 will be eligible.

All entries are reviewed by a panel of judges comprising representatives from the publishing and broadcasting fields, the editors of the *Maryland Medical Journal*, and two physicians. They will be judged on the basis of accuracy, significance, quality, public interest, and impact. The winners of each category will receive a plaque and a cash donation of $1,000 to the medical charity of their choice.

Last year's program was a huge success. A donation was made to the Gerontology Research Center Gift Fund on behalf of Jack Bowden of WMAR-TV, the winner of the television category. In addition, two donations were made to the Maryland Institute for Emergency Medical Services Systems on behalf of Michael Summers of WFBR radio and John Franklin of *The Evening Sun*, who were winners in the radio and print categories.

The winners of the Second Annual Media Awards Program will be announced in the next issue of *MMJ*.

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In the Matter of
Alan J. Horowitz MD
Before the
Commission on Medical Discipline

Findings of Fact,
Conclusions of Law, and Order

Based on certain information coming to the attention of the Commission on Medical Discipline (the "Commission"), the Commission determined to charge Alan J. Horowitz MD (the "Respondent") with violation of Section 14-504(6) of the Medical Practice Act, Health Occupations Article, Annotated Code of Maryland.

Findings of Fact

Based on the evidence produced at the hearing, the Commission finds that:

1. At all times relevant to this case, Respondent was a physician licensed to practice medicine in the State of Maryland;
2. On August 31, 1983, the Respondent was convicted of one count of perverted sex practice by the Circuit Court of Washington County, State of Maryland, in violation of Article 27, Section 464(a)(3) of the Annotated Code of Maryland.
3. That this was conviction of a crime involving moral turpitude.
4. That on August 31, 1983, the Circuit Court for Washington County placed the Respondent on probation with the following special conditions:

a. Respondent will participate in and complete a course of psychotherapy to be conducted jointly by Joseph F. Chambers MD, Chairman of the Committee on Physical Rehabilitation of the Medical and Chirurgical Faculty of Maryland, and Dr. Isaac Twersky of Monsey, NY; said psychotherapy is to continue on a regular basis until released by Order of the Circuit Court for Washington County, MD.

b. Respondent is not to practice medicine in the State of Maryland or any other jurisdiction until permission is granted by the Circuit Court for Washington County, MD.

c. Respondent is to participate in a program of Ohr Somayach in Monsey, NY, until released by Order of the Circuit Court for Washington County, MD.

d. Respondent agrees that bi-monthly reports of his progress will be submitted to the Court by Dr. Chambers and Dr. Twersky. The first report having been due on October 1, 1983 by Dr. Chambers and every other month thereafter and the first report having been due from Dr. Twersky on November 1, 1983 and the first of every other month thereafter until further Order of the Circuit Court for Washington County, MD.

e. Respondent is to reside on the campus of Ohr Somayach Institution, Monsey, NY, and shall not change his residence without the prior approval of the Circuit Court for Washington County. Respondent shall not enter into or change any employment without the prior approval of the Circuit Court for Washington County.

Conclusions of Law

Based on the foregoing Findings of Fact, the Commission finds that the Respondent violated Section 14-504(6) of the Medical Practice Act in that he was convicted of a crime involving moral turpitude.

Order

Based on the foregoing Findings of Fact and Conclusions of Law, it is this 18th day of November 1986, by a majority vote of those members of the Commission hearing this case, hereby

ORDERED that the license of the Respondent, Alan J. Horowitz MD, to practice medicine be SUSPENDED for a period of five years from August 31, 1983.

ORDERED that upon the expiration of five years from August 31, 1983, in the event that the conditions of the Order of Probation of the Circuit Court of Washington County, MD dated August 31, 1983, have not been violated, the Commission may terminate the suspension upon a petition by the Respondent and subsequent review of his professional, physical, and mental competence.

HILARY T. O'HERLIHY **MD, Chairman**
Commission on Medical Discipline of Maryland

• • •

In the Matter of
Wilfred D. McCleary MD
Before the
Commission on Medical Discipline

Findings of Fact,
Conclusions of Law, and Order

Based on information coming to its attention, the Commission on Medical Discipline ("the Commission") conducted an investigation and subsequently determined to charge Wilfred D. McCleary MD ("Respondent") with violation of §14-504(6), (12), and (25) of the Maryland Medical Practice Act, (the "Act") Health Occupations Article §14-101 *et seq.*, Annotated Code of Maryland, which provides:

> Subject to the hearing provision of §14-505 of this subtitle, the Commission, on the affirmative vote of a majority of its full authorized membership, may reprimand any licensee, place any licensee on probation, or suspend or revoke a license if the licensee:
>
> •
>
> (6) Is convicted of or pleads guilty or *nolo contendere* with

On instruction of the Council of the Medical and Chirurgical Faculty of the State of Maryland, "Findings of Fact, Conclusions of Law, and Order" will be published in the Maryland Medical Journal.

respect to a crime involving moral turpitude whether or not any appeal or other proceeding is pending to have the conviction or plea set aside;

•

(12) Willfully makes or files a false report or record in the practice of medicine;

•

(25) Willfully submits false statements to collect fees for which services are not provided.

Respondent was notified of the charges by letter dated September 26, 1986. A hearing was scheduled for November 18, 1986. On October 28, 1986, a prehearing conference was held, and as a result of discussions and negotiations, Respondent agreed to enter into the following Consent Order.

Findings of Fact

Based on the information in its files, and otherwise made known to it, the Commission finds:

1. That Respondent is a physician licensed and practicing in Maryland both currently and at all times material to the allegations relating to this matter;

2. That on May 22, 1986, Respondent pled guilty to one count of violating Article 27 §230C of the Annotated Code of Maryland ("Medical Fraud") and one count of violating Article 27, §27 or of the Annotated Code of Maryland ("Obstruction of Justice") in the Circuit Court for Baltimore City, Criminal Information Numbers 18524815 and 28614201;

3. That the charges to which Respondent pled guilty were based on his submitting fradulent invoices and obtaining reimbursement from the Maryland Medical Assistance Program ("Medicaid") for physician services received by his patients and for altering patient records in an attempt to frustrate investigations being carried out by various investigating units within the state government.

4. That as a result of the guilty pleas, Respondent was given Probation Before Judgment and received the following sentence from the Circuit Court for Baltimore City: three years unsupervised probation; restitution in the amount of $21,642; and a fine of $10,485. The Court considered, but did not impose, any community service.

Conclusions of Law

Based on the foregoing Findings of Facts, the Commission on Medical Discipline, by unanimous vote of a quorum of its members, concludes as a matter of law that Respondent violated §14-504(6), (12), and (25) of the Maryland Medical Practice Act, Health Occupations Article, Annotated Code of Maryland, and finds Respondent GUILTY of that charge.

Order

Based on the foregoing Findings of Fact and Conclusions of Law, it is this 10th day of November 1986, by unanimous vote of a quorum of the members of the Commission on Medical Discipline,

ORDERED that the license of Respondent, Wilfred D. McCleary MD, an individual licensed to practice medicine in the State of Maryland, is hereby REVOKED; and be it further

ORDERED that the revocation of Respondent's license shall be immediately STAYED and Respondent placed on PROBATION subject to the following terms and conditions:

1. That Respondent shall meet any conditions imposed by the Circuit Court for Baltimore City in the disposition of the criminal matters that formed the subject of this prosecution;

2. That Respondent shall not engage in activities of the type that led to his criminal conviction;

3. That Respondent shall not violate any other provisions of the Act; and

4. That Respondent shall practice fully in accordance with those standards expected of a competent practitioner of medicine in the State of Maryland; and be it further

ORDERED that after the expiration of five (5) years from the date of this Order, the Commission will entertain a petition for termination of Respondent's probationary status and for restoration of his license to practice medicine without condition or restriction, upon Respondent's demonstrating to the satisfaction of the Commission that he has complied with the terms and conditions of his probation. If the Commission determines that he has not complied with the terms and conditions of his probation, the Commission may modify one or more of the conditions of his probation; and be it further

ORDERED that if Respondent violates any of the foregoing conditions of probation, the stay on the revocation shall be lifted and the Commission, after notification, a hearing, and determination of violation, may impose any additional disciplinary sanctions it deems appropriate.

HILARY T. O'HERLIHY **MD, Chairman**
Commission on Medical Discipline of Maryland

Consent

By this Consent, I hereby admit the truth of the above Findings of Fact and accept and submit to the foregoing Order and its conditions. I have read and acknowledge the validity of the Order as if made after a hearing in which I would have had the right to counsel, to confront witnesses, to give testimony, to call witnesses on my behalf, and to all other substantive and procedural protections provided by law. I also recognize that I am waiving my right to appeal any adverse ruling of the Commission that might have followed any such hearing. By this Consent, I understand that I am waiving all such rights and acknowledge that by my failure to abide by the conditions of the Order, I may suffer disciplinary action against my license to practice med-

icine in the State of Maryland. I sign this Consent without reservation and after conferring with counsel. I fully understand its meaning.

***WILFRED D. McCLEARY* MD**

• • •

In the Matter of
Mohammed A. Mannan MD
Before the
Commission on Medical Discipline

Findings of Fact,
Conclusions of Law, and Order

Based on information coming to its attention the Commission on Medical Discipline ("the Commission") determined to charge Mohammed A. Mannan MD ("the Respondent") with violating two provisions of §14-504 of Title 14 of the Health Occupations Article, Annotated Code of Maryland, the Maryland Medical Practice Act ("the Act"). The specific charge alleges violation of §14-504(12) and (25) of the Act which provides:

> Subject to the hearing provisions of §14-505 of this subtitle, the Commission . . . may . . . reprimand any licensee, place any licensee on probation, or suspend or revoke a license if the licensee:
>
> •
>
> (12) Willfully makes or files a false report or record in the practice of medicine;
>
> •
>
> (25) Willfully submits false statements to collect fees for which services are not provided.

Respondent was properly notified of the charges and allegations by letter dated September 5, 1986. A hearing was scheduled for November 18, 1986. A prehearing conference was held on September 30, 1986. As a result of discussions and negotiations both at and following the prehearing conference, Respondent has agreed to enter into the following Consent Order.

Findings of Fact

The Commission finds that:

1. At all times pertinent to the charges, Respondent was a physician, licensed to practice medicine in Maryland and subject to the jurisdiction of the Board;
2. At all times pertinent to the charges, Respondent practiced medicine in the State of Maryland;
3. During the period from July 1, 1981 through June 30, 1983 Respondent signed invoices for payment from the Maryland Medical Assistance Program; these invoices contained incorrect billing codes and resulted in overpayment to Respondent on 1401 invoices.
4. Many of the 1401 invoices resulted in Respondent collecting fees for services that the Respondent did not perform.
5. At all times pertinent to this Order, Respondent was competent.
6. Respondent, though indicted on charges of Theft and Medicaid Fraud, was never convicted of those charges and pled not guilty to those charges.
7. Respondent denies any willfulness on his part concerning any of the acts that form the basis of the charges in this matter.
8. Respondent was licensed to practice medicine on March 20, 1980 and, other than the events that form the basis of this action, has never been brought before the Commission for any violations of the Act.

Conclusions of Law

The Commission, by unanimous vote of those members considering this matter, concludes as a matter of law that:

1. The Respondent, while competent, permitted an employee of his to submit incorrect billing codes signed by Respondent that resulted in the collection of fees for which services were not provided in violation of §14-504(25) of the Act; and
2. The charge of willfully making or filing a false report in the practice of medicine is dismissed.

Order

Based on the foregoing Findings of Fact and Conclusions of Law it is this 2nd day of December 1986, by a unanimous vote of the quorum of those members of the Commission on Medical Discipline considering this case:

ORDERED that Respondent, Mohammed A. Mannan MD, an individual licensed to practice medicine in Maryland is hereby REPRIMANDED for the above administrative billing code errors.

***HILARY T. O'HERLIHY* MD, Chairman**
Commission on Medical Discipline of Maryland

Consent

By this Consent, I agree to accept and submit to this Order. I admit the Findings of Fact and Conclusions of Law preceding the Order. I acknowledge the validity of the Order as if made after a hearing at which I would have had the right to counsel, to confront witnesses, to give testimony, to call witnesses on my own behalf, and to all other substantive and procedural protections provided by law. I also recognize that I am waiving my right to appeal any adverse ruling of the Commission that might have followed any such hearing. By this Consent, I waive all such rights. I sign this Consent after consulting with my attorney and without reservation, and I fully understand its meaning.

***MOHAMMED A. MANNAN* MD**

• • •

In the Matter of Robert James Sillery MD Before the Commission on Medical Discipline

Findings of Fact, Conclusion of Law, and Order

On July 23, 1986, based on certain information coming to the attention of the Commission on Medical Discipline (the "Commission"), the Commission charged Robert James Sillery MD ("Respondent") with violation of §14-504(22) and (12) of the Health-Occupations Article of the Annotated Code of Maryland which states:

> Subject to the hearing provisions of §14-505 of this subtitle, the Commission, on the affirmative vote of the majority of its full authorized membership, may reprimand any licensee, place any licensee on probation, or suspend or revoke a license if the licensee:
>
> (22) Is disciplined by a licensing or a disciplinary authority . . . for an act that would be grounds for disciplinary action under this section;
>
> •
>
> (12) Willfully makes or files a false report or record in the practice of medicine.

Appropriate notice of the charges and the grounds from which they arose were given by the Commission to Respondent in its letter of July 23, 1986, and a hearing on the charges was scheduled. On September 23, 1986, a prehearing conference was held. Agreement was reached as to the following Consent Order which was presented to and accepted by the Commission.

Findings of Fact

1. At all times relevant to this case, Respondent was a physician licensed to practice medicine in the State of Maryland.

2. At the time of the complained events in this action, Respondent was a physician licensed to practice in the State of Maryland.

3. On or about May 13, 1980, the Michigan Attorney General filed a Complaint with the Board of Medicine charging Respondent with having violated the Public Health Code, 1978 PA 368, as amended. An administrative hearing on the complaint was held before a hearing examiner on November 12, 1981. Based on its findings of fact, the Hearing Examiner concluded that Respondent had violated §16221(a) of the Michigan Public Health Code in that his conduct amounted to:

> A violation of general duty, consisting of negligence or failure to exercise due care, including negligent delegation to or supervision of employees or other individuals, whether or not injury results, or any conduct, practice, or condition which impairs, or may impair, the ability to safely and skillfully practice the health profession.

4. On February 2, 1982, the Michigan Board of Medicine approved and adopted the Hearing Examiner's findings of fact and conclusions of law. It ordered that Respondent's license to practice be suspended for two (2) years and that during each year of the two-year suspension period Respondent shall earn fifty (50) hours of Category I continuing education credit. It further ordered that if, upon Respondent's petition for reinstatement, the Board orders reinstatement of his license, the Respondent is to be placed on probation for five years subject to the condition that:

> Respondent shall appear before a board member or duly designated representative of the Board, to review and discuss Respondent's professional activities for the preceding three (3) months, with the major emphasis on the review of autopsy reports performed by Respondent during the aforesaid period.

5. The Respondent appealed and in December 1983 the Board's order was reversed by a Judge of the Circuit Court for the County of Wayne. However, the Board of Michigan appealed to the State of Michigan Court of Appeals which reversed the Circuit Court order on or about September 16, 1985. The Respondent then filed an application for leave to appeal with the Supreme Court of the State of Michigan. Application for leave to appeal was denied by that Court on April 29, 1986, which became the effective date of the Board's order.

This Commission adopts the following Findings of Fact which were set out in the Opinion of the Hearing Examiner:

1. The Respondent at all times, pertinent to this Complaint, was licensed to practice medicine pursuant to the Public Health Code.
2. The Respondent is a pathologist practicing in Wayne, Oakland, and Macomb Counties and presently during the period of the hearings, was the medical examiner of Oakland County.
3. On April 23, 1975, Respondent performed an examination on the body of a 17-year-old female, D.M., at the Duross Funeral Home, in the City of Warren at the request of the family and counsel for the family in civil litigation.
4. Respondent memorialized the findings of this examination in a three-page report captioned "Autopsy Report" identified as Autopsy No. A-5-79 consisting of two parts labeled "Gross examination" and "Microscopic Description." Following Microscopic Description are two microscopic diagnoses: 1. Edema Pulmonary, 2. Edema Cerebral.
5. On December 12, 1979, Werner Spitz MD performed an autopsy upon the body of a 17-year-old female, D.M., at the request of Robert S. Krause, attorney for Eli Lilly Co., Defendants, in a certain civil litigation matter. This autopsy was performed subsequent to the examination of Dr. Sillery.
6. Dr. Spitz memorialized an autopsy report principally of three pages with attachments (Complainant's Exhibit 2) with an opinion that D.M. died of massive pulmonary embolism, the size and location was incompatible with life.
7. On the basis of the examinations by both doctors, and the cumulative testimony of each, the following findings can be made:

   a. Respondent examined the right ventricle and heart valves, but did not incise or open the heart.

   b. Respondent reported the weight of the right lung to be 525 grams and the left lung 500 grams, although neither lung was removed from the body. Portions of the lung had been removed for microscopic sectioning.

   c. Respondent reported the weight of the liver as 1100 grams, although the liver was not removed from the body. Sections were removed for microscopic evaluation and for toxicological evaluation.

d. Respondent indicated that the spleen weighed 150 grams, although the spleen was not removed from the body. Sections were taken for microscopic evaluation.

e. Respondent reported that the adrenals weighed 22 grams, together, but the glands had not been removed from the body.

f. Respondent indicated that the right kidney weighed 110 grams and the left kidney 120 grams.

g. Respondent reported the weight of the brain as 1150 grams, but the brain was not removed.

8. Dr. Spitz specifically found a pulmonary embolism and attributed that as the cause of death. Dr. Sillery, by testimony, stated that he had examined the pulmonary arteries and found post-mortem clots which, in his opinion, were not pulmonary emboli.
9. Dr. Sillery, by way of testimony, found lethal dosages of drugs by toxicological examination of the liver, kidney, and brain. Dr. Spitz did not report toxicological findings other than to state that body fluids and tissue samples confirmed that D.M. had taken the medication, Darvon.
10. The record is clear that Dr. Sillery was hired in a private capacity to assist a Plaintiff in preparation of a law suit and Dr. Spitz was hired in his private capacity to assist the Defendant in preparation of their case. Although each is a medical examiner in different counties, neither performed these functions in a public capacity.
11. Respondent was hired by Plaintiff's counsel to obtain sufficient materials from the body of D.M. to determine whether lethal levels of propoxyphene remained in the body of D.M. and to communicate findings to Plaintiff's counsel. Respondent was specifically directed to obtain samples of brain, liver, and kidney for toxicological evaluation. In pursuing the direction of Plaintiff's counsel, Respondent obtained samples of the brain, liver, and kidney for toxicological purposes, but also reported as gross examination descriptions of heart, lungs, liver, gallbladder, spleen, pancreas, adrenals, kidneys, and the brain including weights as previously set forth and performed microscopic examination of the heart, lungs, liver, kidneys, and the brain.

Conclusions of Law

Based on the foregoing findings of fact, the Commission finds that the Respondent has violated §§14-504(22) and (12) of the Health Occupations Article of the Annotated Code of Maryland.

Order

Based upon the foregoing Findings of Fact and Conclusions of Law, it is this 8th day of November 1986, by a majority vote of those members of the Commission on Medical Discipline considering this case, hereby

ORDERED that the license of Robert J. Sillery MD to practice medicine is SUSPENDED for a period of two (2) years, effective retroactively beginning April 29, 1986; and be it further

ORDERED that Respondent comply with the requirement of the Michigan Board Order that he shall earn fifty (50) hours of Category I continuing medical education credit; and be it further

ORDERED that beginning three (3) months prior to April 29, 1988 the Commission will entertain a petition to terminate the suspension on April 29, 1988 thereafter; and will give the Respondent an opportunity to demonstrate to the Commission that such reinstatement is appropriate in light of all facts and circumstances existing at the time of the Petition for Reinstatement; and be it further

ORDERED that in the event the Commission orders the reinstatement of Respondent's license, Respondent shall be placed on probation for a period of five (5) years, subject to the following conditions:

1. Respondent shall file quarterly reports with the Commission describing his professional activities for the previous quarter with the major emphasis on the review of autopsy reports he has performed. Respondent's reports to the Commission shall designate the names and addresses of any private or governmental entities by whom Respondent is employed on a regular basis, and shall indicate whether and to what extent Respondent has practiced medicine in the State of Maryland.

2. Respondent shall inform the Commission of any actions taken by the Michigan Board of Medicine with respect to his license and shall arrange for the Michigan Board of Medicine to send in writing to the Commission copies of any pertinent reports, orders, or any other written materials pertinent to the Board's implementation of its Final Order.

3. Respondent shall refrain from engaging in the conduct that led to the charges against him in this case.

4. Respondent must practice medicine competently and in accordance with the laws of Maryland; and be it further

ORDERED that if Respondent violates any of the foregoing conditions of probation, the Commission, after notification and a hearing, may lift the stay of suspension and impose any disciplinary sanctions it deems appropriate, and be it further

ORDERED that five (5) years from the date probation begins, the Commission will entertain a petition for termination of Respondent's status and full reinstatement of his license to practice. At such time, if Respondent demonstrates that he has complied with the conditions of his probation, the Commission will terminate his probation. If it is determined that termination of probation would not be appropriate, it may modify the terms of this Order.

HILARY T. O'HERLIHY **MD, Chairman**
Commission on Medical Discipline of Maryland

Consent

By this Consent, I hereby admit that there is an adequate factual basis for the disposition set forth above and accept and submit to the foregoing Order and its conditions. I have read and acknowledge the validity of the Order as if made after a hearing in which I would have had the right to counsel, to confront witnesses, to give testimony, to call witnesses on my behalf, and to all other substantive and procedural protections provided by law. I also recognize that I am waiving my

right to appeal any adverse ruling of the Commission that might have followed any such hearing. By this Consent, I understand that I am waiving all such rights. I sign this Consent without reservation and after conferring with counsel and I fully understand its meaning.

ROBERT J. SILLERY MD

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BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR.)*

INDERAL® LA brand of propranolol hydrochloride **(Long Acting Capsules)**

DESCRIPTION. Inderal LA is formulated to provide a sustained release of propranolol hydrochloride. Inderal LA is available as 80 mg, 120 mg, and 160 mg capsules.

CLINICAL PHARMACOLOGY. INDERAL is a nonselective beta-adrenergic receptor blocking agent possessing no other autonomic nervous system activity. It specifically competes with beta-adrenergic receptor stimulating agents for available receptor sites. When access to beta-receptor sites is blocked by INDERAL, the chronotropic, inotropic, and vasodilator responses to beta-adrenergic stimulation are decreased proportionately.

INDERAL LA Capsules (80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with INDERAL LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of INDERAL tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially.

INDERAL LA should not be considered a simple mg for mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to INDERAL LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, INDERAL LA has been therapeutically equivalent to the same mg dose of conventional INDERAL as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure and rate pressure product. INDERAL LA can provide effective beta blockade for a 24-hour period.

The mechanism of the antihypertensive effect of INDERAL has not been established. Among the factors that may be involved in contributing to the antihypertensive action are (1) decreased cardiac output, (2) inhibition of renin release by the kidneys, and (3) diminution of tonic sympathetic nerve outflow from vasomotor centers in the brain. Although total peripheral resistance may increase initially, it readjusts to or below the pretreatment level with chronic use. Effects on plasma volume appear to be minor and somewhat variable. INDERAL has been shown to cause a small increase in serum potassium concentration when used in the treatment of hypertensive patients.

In angina pectoris, propranolol generally reduces the oxygen requirement of the heart at any given level of effort by blocking the catecholamine-induced increases in the heart rate, systolic blood pressure, and the velocity and extent of myocardial contraction. Propranolol may increase oxygen requirements by increasing left ventricular fiber length, end diastolic pressure and systolic ejection period. The net physiologic effect of beta-adrenergic blockade is usually advantageous and is manifested during exercise by delayed onset of pain and increased work capacity.

In dosages greater than required for beta blockade, INDERAL also exerts a quinidine-like or anesthetic-like membrane action which affects the cardiac action potential. The significance of the membrane action in the treatment of arrhythmias is uncertain.

The mechanism of the antimigraine effect of propranolol has not been established. Beta-adrenergic receptors have been demonstrated in the pial vessels of the brain.

Beta receptor blockade can be useful in conditions in which, because of pathologic or functional changes, sympathetic activity is detrimental to the patient. But there are also situations in which sympathetic stimulation is vital. For example, in patients with severely damaged hearts, adequate ventricular function is maintained by virtue of sympathetic drive which should be preserved. In the presence of AV block, greater than first degree, beta blockade may prevent the necessary facilitating effect of sympathetic activity on conduction. Beta blockade results in bronchial constriction by interfering with adrenergic bronchodilator activity which should be preserved in patients subject to bronchospasm.

Propranolol is not significantly dialyzable.



INDICATIONS AND USAGE. Hypertension: INDERAL LA is indicated in the management of hypertension; it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. INDERAL LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: INDERAL LA is indicated for the long-term management of patients with angina pectoris.

Migraine: INDERAL LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

CONTRAINDICATIONS. INDERAL is contraindicated in 1) cardiogenic shock; 2) sinus bradycardia and greater than first degree block; 3) bronchial asthma, 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.

WARNINGS. CARDIAC FAILURE: Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or INDERAL should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following abrupt discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (e.g., chronic bronchitis, emphysema) — PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY: The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, e.g., dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA: Beta-adrenergic blockade may prevent the appearance of certain premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia in labile insulin-dependent diabetes. In these patients, it may be more difficult to adjust the dosage of insulin.

THYROTOXICOSIS: Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol does not distort thyroid function tests.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case, this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS. *General:* Propranolol should be used with caution in patients with impaired hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta-adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be told that INDERAL may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

Clinical Laboratory Tests: Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS: Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if INDERAL is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

Pregnancy: Pregnancy Category C. INDERAL has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. INDERAL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers: INDERAL is excreted in human milk. Caution should be exercised when INDERAL is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular: bradycardia; congestive heart failure; intensification of AV block; hypotension; paresthesia of hands; thrombocytopenic purpura, arterial insufficiency, usually of the Raynaud type.

Central Nervous System: lightheadedness; mental depression manifested by insomnia, lassitude, weakness, fatigue; reversible mental depression progressing to catatonia; visual disturbances; hallucinations; an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics.

Gastrointestinal: nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: bronchospasm.

Hematologic: agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-Immune: In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous: alopecia, LE-like reactions, psoriasiform rashes, dry eyes, male impotence, and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.

DOSAGE AND ADMINISTRATION. INDERAL LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily. If patients are switched from INDERAL tablets to INDERAL LA capsules, care should be taken to assure that the desired therapeutic effect is maintained. INDERAL LA should not be considered a simple mg for mg substitute for INDERAL. INDERAL LA has different kinetics and produces lower blood levels. Retitration may be necessary especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION — *Dosage must be individualized.* The usual initial dosage is 80 mg INDERAL LA once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg once daily or higher until adequate blood-pressure control is achieved. The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

ANGINA PECTORIS — *Dosage must be individualized.* Starting with 80 mg INDERAL LA once daily, dosage should be gradually increased at three to seven day intervals until optimum response is obtained. Although individual patients may respond at any dosage level, the average optimum dosage appears to be 160 mg once daily. In angina pectoris, the value and safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS).

MIGRAINE — *Dosage must be individualized.* The initial oral dose is 80 mg INDERAL LA once daily. The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimum migraine prophylaxis. If a satisfactory response is not obtained within four to six weeks after reaching the maximum dose, INDERAL LA therapy should be discontinued. It may be advisable to withdraw the drug gradually over a period of several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS — 80-160 mg INDERAL LA once daily.

PEDIATRIC DOSAGE — At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

*The appearance of these capsules is a registered trademark of Ayerst Laboratories

REFERENCES:

1. INDERAL LA National Compliance Evaluation Program. Data on file, Ayerst Laboratories.
2. Ravid M, Lang R, Jutrin I: The relative antihypertensive potency of propranolol, oxprenolol, atenolol, and metoprolol given once daily. *Arch Intern Med* 1985;145:1321-1323.

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Miscellaneous Meetings

Apr 23–25 Twenty-third Annual Postgraduate Course in Radiology: The Chest, Medical College of Virginia CME Activity, Richmond Marriott. Fee: $325. Info: K. Parrott, 804-786-0494.

Apr 24 Cocaine: New Strategies in Treatment and Prevention, 8:30 a.m.–4:15 p.m., Mayflower Hotel, 1127 Connecticut Ave NW, Washington. Fee: $90, students/interns/residents $60; 5 Cat I CME credits for physicians, 5 Cat A credits for psychologists, CEUs for substance abuse counselors, National Board of Certified Counselors. Info: A. Cannamela, Psychiatric Institute Foundation, 4460 MacArthur Blvd NW, Washington, DC 20007 (202-476-5717).

Apr 24–26 Ninth Annual Conference on Emergency Medicine for the Primary Care Physician, Medical College of Virginia CME Activity, Fort Magruder Inn and Conference Center. Fee: $295. Info: K. Martin, 804-786-0494.

Apr 24–26 Seventh Annual Clinical Concerns in Primary Care: Office Cardiology, Medical College of Virginia CME Activity; Williamsburg Hospitality House: Fee: $295. Info: K. Martin, 804-786-0494.

Apr 25–26 AMA Conference: DNA Probes in the Practice of Medicine. Info: R.M. Evans, Office of Biotechnology, AMA, 535 N. Dearborn, Chicago, IL 60610 (312-645-4567).

May 1 Biological Factors in Borderline Personality Disorder, 12–1:15 p.m. Psychiatric Institute of Washington Gymnasium, 4460 MacArthur Blvd NW, Washington. Lunch provided, but registration required (limited to 75 registrants), call 202-944-3584. 1 Cat I credit for physicians 1 Cat A credit for psychologists. Info: A. Cannamela, 202 828-1888.

May 6–8 Clinical Heart Disease: Auscultation of the Heart. Clinical Clues from the Physical Exam; Pertinent Cardiology 1987, Washington. Fee: $290 ACC members, $355 nonmembers; 19 Cat I credits. Info: American College of Cardiology 800-253-4636; in Maryland 301-897-5400 ext 226.

May 8–10 Sixth Annual MCV Cardiology Conference, Medical College of Virginia CME Activity, Williamsburg Hospitality House. Fee: $325. Info: K. Martin, 804-786-0494.

May 13–17 MAFP Annual Meeting and Scientific Sessions, Sheraton Fountainebleau Inn & Spa, Ocean City. Up to 30.5 AMA Cat I credits and up to 30.5 AAFP prescribed credits. Info: R. Bonsack MD, 301-659-0640.

May 14–17 Annual Meeting, Virginia Society of Ophthalmology, Sheraton Tysons Corner. Info: D. Strawderman, 4205 Dover Rd., Richmond, VA 23221 (804-353-2721).

May 18–19 Fourteenth Annual Hans Berger Day and EEG Symposium, Medical College of Virginia CME Activity, Baruch Auditorium, Egyptian Bldg., Medical College of Virginia Campus, Richmond, VA. Fee: $250. Info: K. Martin, 804-786-0494.

May 21 Update of Epidemiological Studies in Autoimmune Diseases, Maryland Society for the Rheumatic Diseases. Meeting at the Johns Hopkins Club. Info and reservations: K. Krug, 301-366-0923.

May 23–25 Gynecologic Urology and Pelvic Surgery, Medical College of Virginia CME Actitity, Williamsburg Hospitality House. Fee: $260. Info: K. Martin, 804-786-0494.

May 28–29 First National Symposium on AIDS Prevention: Strategies for Curbing the Epidemic, Omni International Hotel, Baltimore. Info: D. Nelinson, Mental Health Program Director, The Health & Education Council, 7201 Rossville Blvd, Baltimore, MD 21237 (301-686-3610).

Jun 3–7 Eleventh Annual Postgraduate Course on Rehabilitation of the Brain-Injured Adult and Child, Medical College of Virginia CME Activity, Williamsburg Hilton. Fee: $285. Info: K. Martin, 804-786-0494.

Jun 15–17 Management of Clinically Localized Prostate Cancer, NIH Consensus Development Conference, Warren Grant Magnuson Clinical Center, Bethesda. Info: N. Cowan, Prospect Assoc., 1801 Rockville Pike, Ste 500, Rockville, MD 20852 (301-468-6555).

Jul 13–15 NIH Consensus Development Conference: Neurofibromatosis, Warren Grant Magnuson Clinical Center, NIH, Bethesda. Info: B. McChesney, Prospect Assoc., Ste 500, 1801 Rockville Pike, Rockville, MD 20852 (301-468-6555).

Jul 17–19 Practical Internal Medicine: Selected Topics for the Internist, Medical College of Virginia CME Activity, Cavalier Resort, Virginia Beach, VA. Fee: $295. Info: K. Martin, 804-786-0494.

Jul 31–Aug 2 Ninth Annual Pediatric Primary Care Conference: Pediatrics at the Beach, Medical College of Virginia CME Activity, Cavalier Resort, Virginia Beach, VA. Fee: $275. Info: K. Martin, 804-786-0494.

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The Johns Hopkins Medical Institutions

All courses at the Turner Auditorium Building unless otherwise indicated. Sponsored Continued Education Activities for 1986–87. Info: Office of Continuing Education, 720 Rutland Ave., Turner Auditorium, Baltimore, MD 21205 (301-955-5880).

Apr 25 Fourth Annual Houston Everett Memorial Course in OB/GYN Urology. Fee: $90 physicians, $75 residents & fellows (with letter verifying status); 9 AMA Cat I credits. Info: 301-955-6046.

Apr 30 DRADA/Johns Hopkins Symposium on Major Affective Disorders. Fee: $15; appropriate credits applied for. Info: 301-955-6085.

May 1 Treatment of Eating Disorders. Fee: $110; AMA Cat I credits. Info: C. Kearney 301-955-3168.

May 4–5 Industrial Hygiene Sampling and Exposure Assessment: A Course for Safety Professionals, Tremont Plaza Hotel, Baltimore. Fee: $350.

Info: J. Corn 301-955-2609.

May 22 Seventeenth Anniversary Meeting of the Retinal Vascular Center—Clinical Trials and The Practice of Ophthalmology. Fee: $190, residents and fellows $100. Info: D. Heydinger 301-955-6046.

Jun 4–5 Eighth Annual Intensive Training in Spirometry Testing. Fee: $350. Info: J. Corn 301-955-2609.

Jun 8–10 Toxicology Update '87. Appropriate credit pending. Info: J. Corn 301-955-2609.

Jun 15–16 An Advanced Pediatric Life Support Course. Fee: $375, 20 AMA Cat I credits, 19 ACEP Cat I credits. Info: C. Sentman 301-955-6085.

Jul 9 Planning Functional Endoscopic Surgery by CT. Fee: $150; AMA Cat I credits. Info: C. Kearney 301-955-3168.

Jul 13–17 Control of Biohazards in the Research Laboratory. Info: F.S. Tepper 301-955-5918 or J. Corn 301-955-2609.

Johns Hopkins Medical Grand Rounds: audiocassettes, slides, and booklet. 30 topics and 40 AMA Cat I credits/year. Contact 301-955-3988, Office of Continuing Education, 720 Rutland Ave., Baltimore, MD 21205.

Ophthalmic Electrophysiology Technician Training Course (on-going 1-week course by appointment), The Wilmer Eye Institute, Baltimore. Info: C.M. Kearney.

The Department of Radiology and Radiological Science offers several courses in abdominal and obstetrical ultrasound: Courses scheduled 1/12/87–12/7/87. Info: J. Mosmiller 301-955-8450.

Basic Practicum, May 11–15, Nov 16–20. Fee: $460; 40 AMA Cat I credits.

Advanced Obstetrics & Gynecology May 8–10. Fee: $325; 24 AMA Cat I credits.

Advanced Practicum in Ultrasound Dec 7–11. Fee: $460; 40 AMA Cat I credits.

Visiting Physicians is offered throughout the year, by appointment only. Fee: $460; 40 AMA Cat I credits.

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CME Courses: For each course additional information may be obtained by contacting Program of Continuing Education, University of Maryland School of Medicine, Room 300, MSTF, 10 South Pine St., Baltimore, MD 21201 (301-328-3956).

May 1 Current Concepts Concerning Hepatitis Viruses, Seventh Annual Abraham H. Finkelstein Memorial Lecture in Davidge Hall, 1:30 p.m. Speaker will be David H. Carver MD, Chief of Pediatrics at the Hospital for Sick Children in Toronto, Canada. Luncheon reception will follow. CME credits. Info: C. VanBesien 301-328-6777.

May 8–9 Current Practical Concepts in Endocrinology and Metabolism—1987, Omni International Hotel, Baltimore. Fee: $125; 10.5 AMA Cat I credits.

June 4–6 Annual OB/GYN Symposium, Sheraton Fontainebleau Inn and Spa, Ocean City. Fee TBA; 12 AMA Cat I & ACOG credits.

June 12 Topics in Ophthalmologic Surgery, Cataract Surgery and the Socioeconomic Issues Facing Ophthalmologists Today, Columbia Inn, Columbia, MD. Info: Maryland Society of Eye Physicians and Surgeons at 7901 Annapolis Rd., Lanham, MD 20706 (301-459-2986).

Jun 21–26 13th Annual Family Medicine Review Course, Carousel Hotel, Ocean City. Fee: $395, 20.75 AMA Cat I and AAFP credits.

Jun 25–27 Dermatology Days, Carousel Hotel, Ocean City. Fee: $250 before Jun 1; $275 thereafter; 12.75 AMA Cat I credits.

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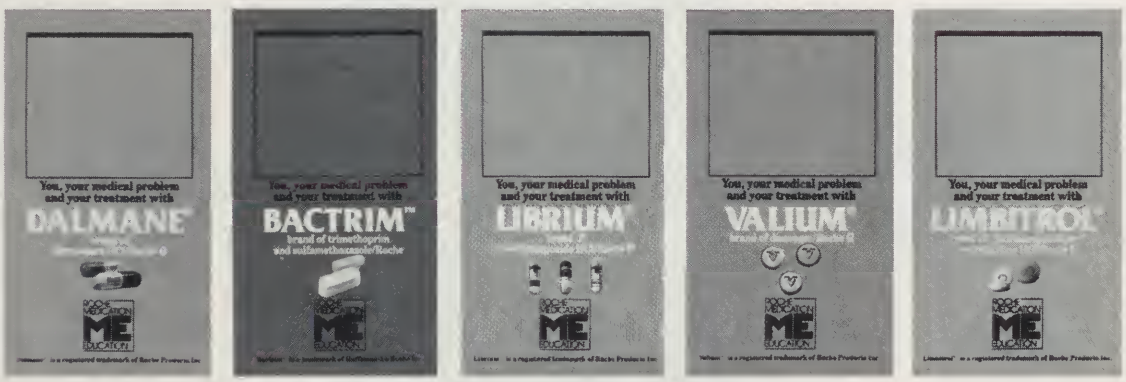
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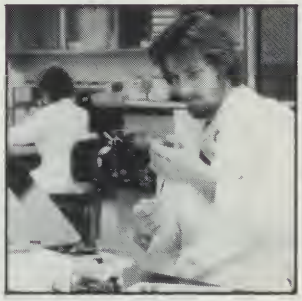
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Cover by John Benson, Illustrator. We thank US Air for its gracious help and cooperation in allowing us on-site photo access to emergency medical equipment at BWI. Articles on in-flight medical emergencies begin on page 421.

The views in this publication are those of the authors and do not necessarily reflect the opinion of the Medical and Chirurgical Faculty of the State of Maryland.



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A specialty Alzheimer Disease Care Unit has been created at Meridian Nursing Center—Heritage in consultation with The Johns Hopkins University Medical Institutions to develop innovative approaches to care. To advance this research, Meridian funds an Alzheimer Disease Research Fellowship in The Johns Hopkins University Department of Psychiatry.

Alzheimer Disease is a little understood, even frightening facet of aging about which more public information is needed. To address this need, Meridian Healthcare has produced a booklet on Alzheimer. This guide will be offered free in commercial radio broadcast advertising as part of Meridian's continuing public information campaign.

Our concern with Alzheimer Disease is only one of many ways Meridian Healthcare is different. For more detailed information on our Alzheimer program or on any of our 13 Nursing Centers in Maryland, call or send the coupon for our free *Referrer's Guide*.

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Adele Wilzack, R.N., M.S.
Secretary of Health and Mental Hygiene
Eric M. Fine, M.D., M.P.H.
Director, Preventive Medicine Administration
Ebenezer Israel, M.D., M.P.H.
Chief, Office of Disease Control & Epidemiology

Office of Disease Control and Epidemiology Newsletter

PREVENTIVE MEDICINE ADMINISTRATION
MARYLAND DEPARTMENT OF HEALTH AND MENTAL HYGIENE

201 W. PRESTON STREET/BALTIMORE, MARYLAND 21201/(301) 383-2644

MAY 1987

MARYLAND AIDS UPDATE...APRIL 30, 1987

MARYLAND AIDS STATISTICAL UPDATE

I. Cases by place of residence and vital status

	SINCE JAN1, 1987		CUMULATIVE	
	Cases	Deaths	Cases	Deaths
Baltimore City	26	5	213	133
Suburban Baltimore counties:				
Anne Arundel	4	1	31	18
Baltimore County	7	0	38	24
Carroll / Harford / Howard	2	1	19	12
Metro Baltimore subtotal:	39	7	301	187
Suburban DC counties:				
Montgomery	13	3	92	50
Prince George's	17	2	135	84
Calvert / Charles / Frederick / St. Mary's	1	1	14	9
Metro DC (MD) subtotal:	31	6	241	143
Eastern Shore	1	1	22	20
Western MD	0	0	8*	4
MD total:	71	14	572	354

	Cases	Deaths
Washington, D.C.	649	392
Virginia suburbs	210	113
Maryland suburbs	241	143
Metro D.C. total:	1,100	648
National: (CDC data as of April 27,1987)	35,068	20,241

	SINCE JAN1, 1987		CUMULATIVE	
	Cases	Percent	Cases	Percent
II. SEX				
Male	64	90.1	523	91.4
Female	7	9.9	49	8.6
Total	71	100.0	572	100.0
III. RACE				
White	32	45.1	258	45.2
Black	39	54.9	293	51.2
Hispanic	0	0.0	19	3.3
Other	0	0.0	2	0.3
Total	71	100.0	572	100.0
IV. AGE				
0-12	1	1.4	9	1.6
13-19	0	0.0	1	0.2
20-29	14	19.7	100	17.5
30-39	34	97.9	258	45.1
40-49	13	18.3	121	21.1
50 +	9	12.7	83	14.5
Total	71	100.0	572	100.0
V. DISEASE				
Kaposi's Sarcoma	2	2.8	48	8.4
P. carinii pneumonia	51	71.8	350	61.2
Both KS and PCP	1	1.4	24	4.2
Other Opportunistic Infections	17	24.0	150	26.2
Total	71	100.0	572	100.0

VI. BY YEAR OF DIAGNOSIS

	CASES	DEATHS (%)
1981-1982	9	9 (100%)
1983	32	29 (90.6%)
1984	79	71 (89.9%)
1985	168	133 (79.2%)
1986	213	98 (46.0%)
1987ytd	71	14
Total	572	354 (61.9%)

*Several cases were deleted from the AIDS data base this month due to reclassification as cases not meeting the CDC case defintion. One deceased case was from Western Maryland and is the reason for the apparent descrepancy.

VII.TRANSMISSION CATEGORY

	SINCE JAN 1, 1987				CUMULATIVE			
Adult	Male	Female	Total	Percent	Male	Female	Total	Percent
Homosexual	34	0	34	47.9	273	0	273	47.7
Bisexual	12	0	12	16.9	96	0	96	16.8
Homo/Bi IV Drug Abuser	3	0	3	4.2	24	0	24	4.2
IV Drug Abuser	5	2	7	9.9	56	19	75	13.1
Heterosexual	2	4	6	8.5	4	16	20	3.5
Hemophiliac	1	0	1	1.4	5	0	5	0.9
Born in NIR Country	0	0	0	0.0	9	0	9	1.6
Transfusion Recipient	1	1	2	2.8	24	6	30	5.2
No Identified Risk	5	0	5	7.0	25	6	31	5.4
Adult Subtotal:	63	7	70	98.6	516	47	563	98.4
Pediatric								
HIV Infected Parent	1	0	1	1.4	5	2	7	1.2
Transfusion Recipient	0	0	0	0	2	0	2	0.4
No Identified Risk	0	0	0	0	0	0	0	0.0
Ped. Subtotal:	1	0	1	1.4	7	2	9	1.6
Total:	64	7	71	100.0	523	49	572	100.00

IN REVIEW

DeVita, V.T.,Broder, S.,Fauci, A.S.,Kovacs,J.A.,Chabner,B.A. Developmental Therapeutics and the Acquired Immunodeficiency Syndrome. Annals of Internal Medicine. 106:568-581. April,1987.

In an edited summary of a Combined Clinical Staff Conference held in February at NIH, the authors present a brief review of current research directions taken in the effort to develop a treatment for AIDS and the opportunistic infections present in AIDS. The article rarely gets too technical for the informed lay reader and presents a fine primer in program logic.

DeVita summarizes the joint NCI/NIAID program of developmental therapeutics, explaining the program logic and reviewing the progress of several drugs in the program.

Broder summarizes the virus replication cycle and points out opportunities when treatment can directly stop the replication cycle, and then reviews several specific drugs: ribivarin, Foscarnet, HPA-23, suramin, 2',3'-dideoxynucleosides, and, most intensively, 3'-azido-3'-deoxythymidine(AZT).

Fauci reviews immunomodulators, those agents that enhance the defective immune systems. Transfer of syngeneic lymphocytes, bone marrow transplantation, the interferons, and interleukin-2 fall in this category.

Kovacs reviews the agents used to directly treat the opportunistic conditions common to AIDS. Current drug regimens used in treatment of pneumocystis pneumonia, toxoplasmosis, cryptococcosis, and cytomegalovirus disease are discussed. Chabner continues this discussion by reviewing recent research on improved drug regimens for treatment of pneumocystis pneumonia and toxoplasmosis.

MARYLAND STATE DEPARTMENT OF HEALTH AND MENTAL HYGIENE
REPORTED CASES OF NOTIFIABLE DISEASES IN MARYLAND IN 1986 BY ONSET DATE

POLITICAL SUBDIVISION		RUBEOLA (MEASLES)	RUBELLA (GERMAN MEASLES)	INF. PAROTITIS (MUMPS)	PERTUSSIS	VIRAL HEPATITIS				MENINGOCOCCAL INFECTIONS	MENINGITIS, H. INFLUENZAE	MENINGITIS, VIRAL	ENCEPHALITIS, VIRAL	ROCKY MOUNTAIN SPOTTED FEVER	TUBERCULOSIS	SALMONELLOSIS	TYPHOID FEVER	SHIGELLOSIS	SYPHILIS, PRIMARY AND SECONDARY	SYPHILIS OTHER	GONORRHEA	ANIMAL BITES	RABIES, ANIMAL
						A	B	NA/NB	UNSP.														
STATE TOTALS	1986	35	1	34	166	198	840	84	29	52	109	275	34	29	362	1642	16	233	448	574	28287	10451	683
	1985	115	6	38	312	89	709	120	52	61	100	281	32	27	434	1504	12	190	500	663	31270	11065	760
	1984	22	1	46	59	60	694	109	85	46	118	215	37	26	427	1346	3	242	451	704	28480	11484	1100
	1983	11	3	45	39	120	827	98	95	53	93	273	24	34	409	1407	6	462	517	799	30368	12071	838
	1982	5	36	34	80	177	764	90	124	44	87	119	22	37	540	1257	12	144	491	803	32179	11752	152
	Population Maryland State 4,428,400																						
	Baltimore City 748,600	--	--	5	57	31	315	12	6	6	17	31	4	2	142	559	--	55	280	373	16278	2168	75
	Counties, total	35	1	29	109	167	525	72	23	46	92	244	30	27	220	1083	16	178	168	201	12009	8283	608
	Allegany 75,000	--	--	--	12	3	--	1	--	2	3	6	1	1	5	25	--	--	--	1	63	296	6
	Anne Arundel 404,200	4	--	1	13	19	65	7	2	6	8	23	--	5	18	105	--	13	2	14	975	1245	109
	Baltimore Co. 673,300	5	--	5	27	20	89	11	6	7	14	54	8	2	21	190	2	16	16	17	1064	769	91
	Calvert 42,100	--	--	--	--	1	7	1	--	2	--	2	--	--	1	5	--	--	1	1	104	93	34
	Caroline 24,200	--	--	--	4	--	5	1	--	--	--	5	--	1	2	12	--	--	--	1	182	70	1
	Carroll 110,200	--	--	--	7	13	15	2	1	2	6	7	3	--	1	22	--	--	1	--	50	292	17
	Cecil 67,100	--	--	1	--	16	11	--	--	1	4	3	1	--	4	46	--	1	3	5	199	318	1
	Charles 87,900	1	--	1	--	1	8	2	1	1	4	7	1	3	12	31	--	12	1	8	225	233	28
	Dorchester 29,700	--	--	--	--	--	8	2	1	1	3	5	1	1	2	13	--	--	8	6	318	49	--
	Frederick 130,800	--	--	4	3	8	14	2	1	--	2	2	--	3	8	35	--	2	--	3	326	397	18
	Garrett 26,600	--	--	1	2	--	--	1	1	--	1	2	--	--	1	3	--	--	--	--	8	69	9
	Harford 154,500	7	--	1	5	6	17	5	1	2	--	8	2	1	6	34	1	6	5	6	198	465	181
	Howard 146,600	1	--	1	9	7	21	2	--	2	5	6	4	--	5	84	--	14	2	4	173	371	4
	Kent 16,900	--	--	--	--	1	2	--	--	--	1	--	--	--	2	1	--	--	--	--	101	49	--
	Montgomery 651,900	12	1	9	7	29	68	13	2	8	13	41	2	1	51	177	9	31	13	15	1099	1090	34
	Prince George's 678,900	5	--	4	7	27	110	5	3	11	19	25	1	1	49	160	4	78	49	89	5398	1427	21
	Queen Anne's 29,300	--	--	--	--	--	2	--	1	--	--	7	--	2	1	7	--	2	1	--	85	98	2
	Saint Mary's 66,500	--	--	--	--	2	6	3	1	--	2	2	--	1	6	2	--	2	--	3	160	192	50
	Somerset 19,000	--	--	--	1	--	10	1	--	--	--	--	--	--	1	9	--	--	6	4	93	69	--
	Talbot 27,400	--	--	--	1	6	4	1	--	--	--	3	--	3	2	12	--	--	4	--	129	99	1
	Washington 113,600	--	--	--	--	3	39	2	1	1	5	27	5	2	2	29	--	1	13	6	335	317	1
	Wicomico 68,700	--	--	--	1	2	14	9	1	--	--	6	1	--	17	53	--	--	39	16	538	204	--
	Worcester 35,400	--	--	1	10	3	3	--	--	--	2	3	--	--	3	28	--	--	4	2	186	71	--

OTHER-DISEASE	STATE	BALTO. CITY	COUNTIES
AIDS	213	86	Balt-12, AA-13, Mont-38, PG-40, all other-24
Amebiasis	14	4	AA-3, Balt-1, Mont-5, Wash-1
Botulism	1	-	Mont-1
Brucellosis	1	-	Al-1
Chickenpox	1759	344	Al-14, AA-100, Balt-64, Carol-4, Ce-140, Ch-25, Har-3, How-662, Mont-4, PG-368, QA-9, StM-1, Som-3, Tal-8, Wash-8, Wic-1, Wor-1
Cholera	1	-	How-1
Guillain-Barre' syndrome	17	3	AA-1, Balt-2, Carr-1, Dor-1, Har-4, PG-2, QA-1, Som-2
Influenza-like Illness	1426	1029	AA-64, Balt-39, Cal-37, Carol-20, Ch-2, How-88, Mont-1, PG-145, Wash-1
Kawasaki syndrome	9	-	AA-1, Balt-2, Carol-1, Carr-1, Ce-1, Mont-2, Wic-1
Legionellosis	52	6	Al-1, AA-1, Balt-2, Carr-1, Ce-3, Ch-27, Mont-3, PG-2, Wash-4, Wic-1, Wor-1
Lyme's disease	9	-	Balt-1, Ce-2, Kent-2, PG-1, QA-2, Wor-1
Malaria	17	2	Al-1, AA-1, How-1, Mont-9, PG-3
Meningitis, bacterial, other*	141	42	Fr-3, Har-5, How-4, Mont-14, PG-14, Wash-4, Wic-4
Mycobacteriosis atypical	125	22	Al-1, AA-13, Balt-13, Cal-1, Carr-1, Ch-1, Dor-1, Har-3, Mont-22, PG-42, Tal-3, Wash-1, Wor-1
Non-staph infections in newborn	152	21	Al-3, AA-10, Balt-69, Carr-4, Har-13, How-1, Mont-9, PG-4, StM-1, Som-1, Wash-6, Wic-7, Wor-3
Psittacosis	1	-	Ch-1
Reye's syndrome	2	-	Ch-1, PG-1
Staph infections in newborn	36	9	Al-1, AA-2, Balt-14, Carol-3, Ch-1, Fr-1, Har-1, How-1, Mont-1, StM-1, Tal-1
Streptococcal infections	13,509	2744	Al-1400, AA-845, Balt-897, Cal-101, Carr-2, Ce-47, Ch-1216, Dor-3, Fr-2, Har-64, How-1696, Kent-1, Mont-64, PG-2845, QA-79, StM-212, Som-12, Tal-463, Wash-157, Wic-659
Tetanus	2	-	Balt-1, Mont-1
Toxic shock syndrome	2	-	Fr-1, PG-1
Tularemia	2	-	Al-1, Mont-1

*excluding N. meningitidis and H. influenzae meningitis.

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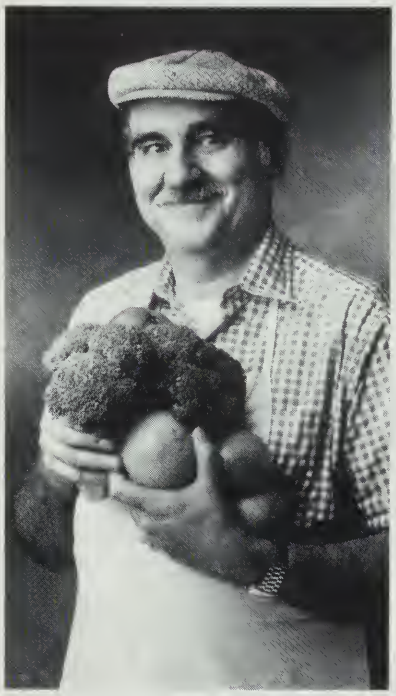
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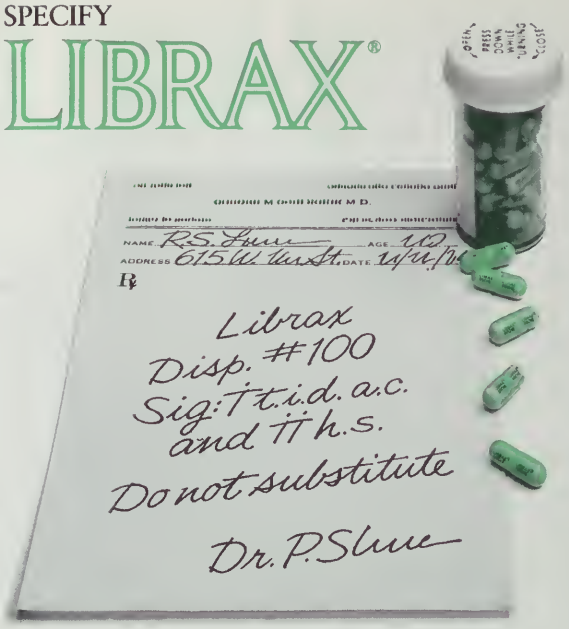
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As with all anticholinergics, inhibition of lactation may occur.

Precautions: In elderly and debilitated, limit dosage to smallest effective amount to preclude ataxia, oversedation, confusion (no more than 2 capsules/day initially; increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider pharmacology of agents, particularly potentiating drugs such as MAO inhibitors, phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions reported in psychiatric patients. Employ usual precautions in treating anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship not established.

Adverse Reactions: No side effects or manifestations not seen with either compound alone reported with Librax. When chlordiazepoxide HCl is used alone, drowsiness, ataxia, confusion may occur, especially in elderly and debilitated; avoidable in most cases by proper dosage adjustment, but also occasionally observed at lower dosage ranges. Syncope reported in a few instances. Also encountered: isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent, generally controlled with dosage reduction; changes in EEG patterns may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice, hepatic dysfunction reported occasionally with chlordiazepoxide HCl, making periodic blood counts and liver function tests advisable during protracted therapy. Adverse effects reported with Librax typical of anticholinergic agents, *i.e.*, dryness of mouth, blurring of vision, urinary hesitancy, constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diets.

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*Librax has been evaluated as possibly effective as adjunctive therapy in the treatment of duodenal ulcer and the irritable bowel syndrome.

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Medical Family Stress

As most of you are aware, stress in medical families is a serious problem that is growing by leaps and bounds as more and more changes occur in the profession. None of us is immune, and the only help must come from within.

We can look around and see the number of physicians who are taking an early retirement or severely curtailing their procedures to avoid higher insurance premiums. Younger physicians just out of residency are confused by what has happened during the time since they started medical school until they finished their training. Those caught in the middle, too young for retirement and too old to leave established private practice for corporate protection, constantly wonder when the next shoe will drop.

Physician burnout, alcohol and drug abuse, difficulty with children, and divorce are the prices we are paying for the changes facing our spouses. As auxilians, we must start self-help programs in our counties to counteract these problems. We hope we will be able to get help from our county societies in establishing these groups.

Each of us thinks we are alone in our fears and feelings, but after attending the meetings in Chicago for the national auxiliary, I can assure you these same fears and feelings are nationwide. Whether an auxilian lives in New Hampshire or Kansas or Oregon, we all face the same problems.

The mid-Atlantic states of Virginia, West Virginia, Maryland, and Pennsylvania presented a program on medical family stress at our fourth multistate conference in Hagerstown on April 1 and 2, 1987. We dealt with impairment, leisure education, physicians' families, and other topics.

Two excellent books deal with the experiences of the authors, and I suggest that you read them. The first book, *Defendant*, by Sara Charles MD and Eugene Kennedy, concerns a malpractice suit faced by Dr. Charles and what she felt about herself as a physician and a person. *Healing the Wounds*, by David Hilfiker MD, recounts the stresses of a family practitioner in a rural area and what he did about them. While you may not agree with everything these two people say, they do make some valid points about the medical profession, physicians, and the society in which we live.

By becoming informed about the problems around us, we will be able to cope with them. These books and the conference should help our Maryland auxiliaries be one step ahead in the years to come.

***NANCY H. HOWELL,* Immediate Past President**

Auxiliary to the Medical and Chirurgical Faculty of the State of Maryland. Mrs. Ching Barretto President; Mrs. Nancy H. Howell, Editor.

New Auxiliary to be Formed

Each year the Members-at-Large Committee is blessed with wonderful workers. Last year Howard County's Pat Bahr and Frederick County's Monica Ball, Maria Baker, and Georgia Lizas contributed greatly to the formation of the Auxiliary to the Frederick County Medical Society.

This year Myrna Goodman (from Prince George's County) extended a helping hand to members-at-large in Calvert County. As a result, I am delighted to announce that Calvert County's Mady Rivera has expressed the desire to organize a Calvert County Auxiliary.

***MADRIAN SNYDER*, Chairman**
Members-at-Large

• • •

Doctors' Day

Many activities were planned around our state for the celebration of Doctors' Day. Those of us in medicine know the contributions made by our associates to the communities where they reside. The Southern Medical Association Auxiliary wishes us to continue our plans and activities, but we are asking that you place emphasis on the most important aspect of our organization, Community Service. There is a definite change in attitudes and in the membership of auxiliaries. The sharing of a community service project is of primary concern to all. Let us plan to sponsor or share in that service to your community.

***GINNY LEVICKAS*, Councilor**
Southern Medical Association Auxiliary

PHYSICIAN PLACEMENT SERVICE

The Medical and Chirurgical Faculty of the State of Maryland maintains a Placement Service for the convenience of Maryland physicians, hospitals and communities in search of candidates for positions available in our state. A detailed description of such opportunities should be forwarded to the Physician Placement Service, 1211 Cathedral St., Baltimore, MD 21201; telephone 1-301-539-0872.

Physicians wishing to locate in Maryland are invited to submit a resumé to be kept on file with the Physician Placement Service. Candidates are requested to inform the Faculty when they are no longer available for consideration for opportunities which might be available in Maryland.

Journal announcements on the Classified Advertising page for Physician Placement Service are charged at the regular Classified Advertising rate.

Members in the News

Donald E. Dillon MD has been elected to the board of directors at Montgomery General Hospital, Olney. A member of Montgomery General's medical staff for 15 years, Dr. Dillon served as medical staff president from 1981 to 1984. He also served on the medical staff's executive committee for six years.

Dr. Dillon received his medical degree from Harvard Medical School in 1959, then completed an internship at Walter Reed General Hospital in Washington and residency at Letterman General Hospital in San Francisco before serving nine years with the U.S. Army. During his service, Dr. Dillon earned the Army's commendation medal for meritorious service.

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Harry R. Katz MD recently received three U.S. Patents for radiotherapy instruments he invented for performing radioisotope implants in cancer treatment. These inventions are U.S. Patent 4,586,490 Needle Inserting Instrument Means for Interstitial Radiotherapy; U.S. Patent 4,627,420 Needle Inserting Instrument for Interstitial Radiotherapy; and U.S. Patent 4,642,096 Position Locating Device and Method for Interstitial Radiotherapy.

Dr. Katz received his medical degree from Thomas Jefferson University, where he served his residency in radiation therapy. From 1977 to 1986 he practiced at the American Oncologic Hospital of the Fox Chase Cancer Center and from 1979 to 1986 he was an Assistant Professor of Radiation Therapy at the University of Pennsylvania School of Medicine. Since April 1986 he has been in practice at the Washington Adventist Hospital in Takoma Park.

• • •

Michael Sherman MD recently was named Chairman of the Department of Radiology at Franklin Square Hospital Center where he will be supervising every aspect of the Department's operation.

A native Baltimorean Dr. Sherman received his undergraduate degree from Duke University. He attended the University of Maryland School of Medicine, where he also completed his residency. Dr. Sherman has been an active member of FSHC's medical staff for 15 years and is a past president of the Maryland Radiological Society. He is a Councilor to the American College of Radiology and was elected to Fellowship in the College in 1982.



A plaque "In Gratitude for His Dedication, Compassion, and Professional Judgment in Serving His Fellow Physicians and the People of the State of Maryland" was presented to **Merton L. White** MD by **Michael R. Dobridge** MD on behalf of Med-Chi and the Commission on Medical Discipline, January 13, 1987.

Look for *Med-Chi Meetings* schedule in each issue of *MMJ.*

We invite your comments as well as scientific articles. Write *Letters to the Editor* and *Commentary* *MMJ,* 1211 Cathedral St, Baltimore, MD 21201

Doctor, Planning to Relocate?

If you are moving or planning to, please let us know so that you won't miss a single issue of the **Journal.** Just fill out the form below and mail it to: Doris Cicchini, **Journal,** 1211 Cathedral St., Balto., MD 21201.

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Executive Director's Newsletter

May 1987

LEGISLATIVE SUMMARY

The closing hours of the 1987 General Assembly proved successful for the physicians of Maryland and their patients. HB 1593, introduced late in the session, passed the General Assembly and will be signed into law by Governor William Donald Schaefer on June 1. Reversing an age-old legal doctrine, this law will permit a modification of damages in medical malpractice awards based on evidence presented at either the panel or court level. It authorizes a party to request that an award of damages be reduced to the extent that the plaintiff has been or will be paid for any damages assessed.

Another important aspect of the law is the inclusion of a mutual arbitration waiver in any health care malpractice claim. Lastly, the law sets up a Tort and Insurance Reform Oversight Committee to examine and evaluate the condition of the medical liability insurance structure in Maryland and the effect of this act and other tort and insurance reform acts on the system.

Also scheduled to be signed on June 1 by Governor Schaefer is SB 225, which lowers the age at which the statute of limitations in a medical malpractice claim for an injury to a minor begins to run. Under the present law, if the claimant was under 16 years old at the time of the alleged injury, the statute of limitations begins to run when the claimant reaches the 16th birthday. SB 225 lowers to 11 years the age at which the statute of limitations would begin to run.

DRGs for RAPS

In the April 1987 Executive Director's Newsletter, we made an urgent appeal for help in reaching out to Maryland's eight U.S. Representatives to urge them to cosponsor HOUSE CONCURRENT RESOLUTION 30 opposing President Reagan's proposal to modify Medicare reimbursement mechanisms for inpatient services provided by hospital based radiologists, anesthesiologists, and pathologists (RAPs). The response by Maryland physicians was remarkable. All but Steny Hoyer (D), Prince George's County, District 5, have signed as cosponsors of this most important resolution. Indications are that the Resolution will keep Medicare reimbursement mechanisms more responsive to the needs of the patients and the physicians.

RAP DRG MEETING

The Committee on Hospital Medical Staffs will be meeting on May 27 at 6 p.m. with Dr. Leonard Scherlis, Consultant to the United States House of Representatives Subcommittee on Health and Long Term Care, to discuss Medicare and RAP DRGs. This meeting is open to any hospital-based physician interested in getting up-to-the-minute information about this controversial proposal. If you plan to attend this meeting, please contact LeAnna Wachter at the Faculty office.

PHYSICIANS FEE GUIDE UPDATE

On April 24, 1987 Med-Chi staff met with the Attorney General to discuss our continuing concerns about the usefulness of the publication, Doctors Fees in Maryland. The Attorney General agreed to rename the guide to "indicate prominently that the prices listed show fees for Medicare patients only."

A second Med-Chi concern was the designation of physicians who participate in Medicare with a limited description of either "yes" or "no." The "yes" listed after a physician's name indicates a participating physician who has signed an agreement with the federal government. The designation of "no" next to a physician's name is patently unfair in that it may lead the reader to an inaccurate conclusion. Even though a physician is not a "participating" physician, that physician may on a case by case basis accept Medicare patients.

Despite our strong and numerous objections to the Fee Guide, apparently it will be published soon in some form. We encourage physicians to make their voices heard by writing to J. Joseph Curran, Jr., Attorney General, 7 N. Calvert Street, Baltimore, MD 21202.

LIABILITY INSURANCE INFORMATION

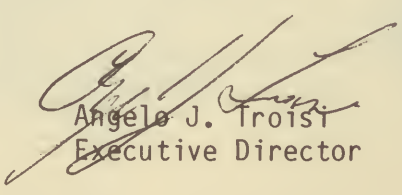
The Insurance Commissioner's Office has informed us that the Physicians Reliance Association, Inc., a nonprofit association, has been approved to solicit membership for a fee in Maryland. The Association is affiliated with the Physicians National Risk Retention Group, Inc., a corporation organized for the purpose of selling physicians liability insurance. However, the Association has not been approved to solicit insurance business at this time. Membership in the Association will not guarantee the member will be issued an insurance policy by the Retention Group. If a policy is issued, the member will be required to pay a premium for that policy. If you have any questions about this group, contact Judith Wood at the Faculty office.

INSURANCE ALERT

The Maryland Insurance Commissioner's Office has notified us that Oak Charter Insurance Limited, an unauthorized insurance company, may have issued medical malpractice insurance in Maryland. On April 16, 1987 the Insurance Commissioner ordered Oak Charter to immediately cease and desist from engaging in or transacting business in Maryland. If you have been approached by this company, please contact Judith Wood at the Faculty office.

MEDICAL ASSISTANCE REIMBURSEMENT POLICY

The Maryland Medical Assistance Program and the Pharmacy Assistance Program, effective February 23, 1987 are reimbursing perscriptions for Enteric Coated Aspirin, 325 mg tablets, when ordered for the treatment of arthritic conditions only. Orders must be written for 325 mg tablets and for quantities of at least 250 tablets. Prescribers must write "for arthritis" or a similar statement on the prescription to insure payment. You may contact the Staff Specialist for Medical Assistance Pharmacy Services at 301-225-1476 for further information.



Angelo J. Troisi
Executive Director

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Community Resources for the Geriatric Patient

STEVEN A. LEVENSON MD

Dr. Levenson is Medical Director, Levindale Hebrew Geriatric Center and Hospital, Baltimore.

Shifts in the relative importance of acute and long-term care in the late twentieth century are partly due to the characteristics of the population at need and partly due to new ideas about how to meet those needs.

In the past, older persons admitted to acute care hospitals were treated for their acute illnesses, then were discharged home or to a nursing home, and left to fend for themselves. Today, we recognize that treatment of acute or chronic illness alone is insufficient for adequate care of the older patient. *Function* is often more important than illness, and the maintenance and restoration of function become central to this care.

Unlike acute care, long-term care (LTC) is *not* provided almost exclusively by trained medical specialists but may be provided by the elderly individual, the individual's family, neighbors, formal or informal community supports, institutions, private providers, or government.

In acute care, the major medical goal for the individual is resolution of an acute illness and return to his or her previous setting. But action in LTC is based on the recognition that other factors besides illness affect subsequent care or placement.

Categories of desired outcome in LTC may range from (1) maximum functional independence, to (2) humane care (including terminal care), to (3) prolonged longevity, to (4) prevention of avoidable medical/social problems. Each demands a somewhat different approach.

For example, maximum functional independence may require a plan centered on a rehabilitation program with relatively little medical intervention, while prolonging longevity may focus on direct medical intervention to treat one or more acute illnesses or complications.

Goals for the elderly are not monolithic. They vary among individuals, and they vary at different times for the same person. Depending on the current medical problem, the underlying chronic condition, the prognosis, and the person's wishes, the same person may be a candidate at various times for a program designed to cure an acute illness, maintain function and prevent deterioration, restore full function, control difficult behavior, precede a period of further observation or evaluation, or die comfortably.

This column is contributed by the Public Relations Committee of the Medical and Chirurgical Faculty of Maryland. We encourage readers to share their thoughts and experiences on the subject. Med-Chi, Public Relations, 1211 Cathedral Street, Baltimore, MD 21201; James E. Bell MD, Chairman.

Components of the LTC System

In the past, LTC and the nursing home often were considered synonymous. But the newer concept of LTC is as a *system*, not an institution or a single program. In addition, LTC is care delivered over time, rather than at one time.

Since function, not illness, is usualy the most important determinant of need, it is instructive to divide the LTC system components according to individual functional levels. Four major dependency categories range from independent, to independence threatened, to independence delegated, to dependent.

Thus, a woman who has been medically stable for years with mild osteoarthritis or asymptomatic coronary artery disease may be considered independent until she starts to have trouble sleeping, shopping, or keeping house because of progressive congestive heart failure, at which time she would be considered in the "independence-threatened" category.

Clearly, much of the LTC spectrum is *non*medically oriented. But physicians frequently *order, authorize, arrange for,* or *support* the services. Therefore, given this major responsibility, the physician needs to know which tests, treatments, medications, orders, care plans, and programs will likely accomplish the goals at the least cost for a given patient.

Another principle of LTC, though still unproved, is that alternatives to institutionalization are preferable wherever possible, for two reasons. First, the cost of institutional care is usually, though not always, greater than that of noninstitutional care. Second, helping a person remain in a more familiar and private surrounding is preferable to providing those same services in a nursing home, all other things being more or less equal. But the alternatives to institutionalization can create various social, financial, and psychological problems, any of which may require the physician to assist the person and his or her family.

Synopsis of LTC Services

The physician should be at least familiar with the general concepts and range of services of the major LTC components, summarized below. All these are available in the larger cities throughout Maryland; in small communities, only some may be found.

- **In-home services** include home health services, meals on wheels, homemaker assistance, and supervised living.

Home health services include part-time or intermittent nursing care provided under the supervision of a registered nurse: physical, occupational, or speech therapy; medical social services under a physician's direc-

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tion; part-time or intermittent services of a home health aide; medical supplies other than drugs.

The *visiting nurse* (or home health nurse) is a licensed nurse who goes into the home, and may assist with activities of daily living (ADL), dispense medicines, monitor blood pressure or other vital signs, evaluate changes in condition, and issue periodic telephone or written reports to the treating physician.

The *home health aide* is an unlicensed person, under the supervision of a registered nurse, who assists an older person in personal care, ambulation and exercise, household services essential to health care at home, and with medications ordinarily self-administered; and who observes and reports changes in condition and needs, and completes appropriate records. The *homemaker* is an unlicensed person (often another elderly individual) who goes into the home to assist in various chores such as cleaning or cooking.

Supervised living is a setting of relatively independent apartment or group housing, with minimal assistance for transportation, meals, and other personal activities.

• **Community based services** include information and referral, senior centers, day care, day hospital, mental health services, and rehabilitation.

Information and referral is a nonmedical service that may, among other things, provide lists of aging-related agencies and practitioners; provide information on self-care, prevention, illnesses, or medications; or triage and channel individuals into and within the system.

Senior centers are usually owned and operated by local governments. These recreational and social sites generally provide one meal but not licensed or supervised medical, nursing, or social services. They may offer educational programs on health-related topics, and they can serve as a source of referral or triage to local health agencies and practitioners.

Adult day care (ADC) is provided in a community based or institutional setting. Recipients of the services usually attend three to five days per week. The programs are supervised by a licensed nurse, and must comply with many federal and state regulations.

ADC services may be categorized as *restorative*—intensive health care including active therapy; *maintenance*—longer duration emphasizing individual care plans with less intense monitoring and treatment; or *social*—mostly activity oriented. Services may include some nursing care and medication administration, nutrition, meals, activities, social services, and various evaluations such as hearing, speech, and podiatry. Most ADC patients are functionally disabled to some degree and require some assistance with activities of daily living. Therefore, rehabilitation services often are provided, including physical, occupational, and speech therapy, and psychological testing and treatment.

Adult day care often complements other services, such as domiciliary care, home health and homemaker services. The combination is often enough to help keep the older person in the community, while any of them

alone might not suffice.

The *geropsychiatric day hospital* provides intensive psychiatric treatment to older persons whose problem is severe enough to require inpatient treatment. Active psychotherapeutic and psychopharmacologic treatment for a limited time is emphasized, with the goal of stabilizing the individual as quickly as possible. Experienced multidisciplinary professionals treat patients directly, rather than merely supervising nonprofessionals.

A *geropsychiatric day treatment program* offers psychiatric supervision, and drug and psychotherapy treatments with limited rehabilitation and social services for persons with problems not severe enough to otherwise require inpatient treatment. Emphasis is on maintenance of current function and independent living. Though time limited, treatment is usually longer than in the GDH. *Geropsychiatric day care* emphasizes custodial care and resocialization. It can serve as a respite care program for families. Nonprofessional staff frequently provide care under the supervision of experienced professionals.

Rehabilitation programs offer supervised, community based physical, occupational, and speech therapy programs to which patients are transported regularly. These usually are in hospital outpatient centers or in freestanding facilities.

• **Institutional services** include geriatric specialty hospitals, inpatient rehabilitation, domiciliary care, and nursing homes.

Geriatric specialty hospitals, referred to in Maryland as "chronic hospitals," care for both acutely ill elderly and those with chronic problems (such as decubitus ulcers) requiring extensive medical or nursing attention. These also may form the bases for "geriatric medical centers" of the future.

Inpatient rehabilitation units, licensed at either the chronic hospital or skilled level, offer intensive, short-term, goal-oriented rehabilitation services including physical, occupational, and speech therapy along with medical intervention and often the services of a rehabilitation medical specialist (physiatrist).

Crossing the boundaries, *life care* is a concept of a package of services and benefits, ranging from housing through medical care, usually for an up-front entry fee plus additional monthly fees. Typically, the housing choices range from apartments to condominiums to a room in a nursing home. Medical care is rarely offered at less than a nursing-care level.

Domiciliary care, a hybrid of institutional and community based care, refers to arrangements for providing various degrees of food, shelter, and limited supervision. Definitions and applications vary widely. The term may include foster homes, private homes, family home care, and community residences. One definition is "any facility, operated for profit or otherwise, which accommodates or is designed to accommodate two or more adults unrelated to the owner or operator and which

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Domiciliary care increasingly is viewed as an option for those elderly and mentally ill/retarded who do not need nursing home institutionalization or medical care. The *nursing home* provides health care to those who require long-term, nonacute medical and nursing care. This would include homes for the aged, the institutionalized mentally retarded, and both intermediate and skilled nursing facilities. *Skilled nursing facilities* provide more intensive nursing care than do intermediate care facilities. The distinctions often are more of a particular state's definition than of clearcut differences in needs, and many institutions house patients requiring intermediate and skilled nursing care together.

Advising on Programs and Placement

The physician invariably will be called on by family, colleagues, or other health care professionals to advise or assist in making decisions about placement or services. On what basis should we advise?

The guiding principle is that the *level of function*, not the diagnosis, is the key to the recommendation. For example, some patients with Alzheimer's disease are quite active and minimally impaired intellectually, while others are severely impaired and still others are bedbound and completely dependent. The same is true for people with strokes, heart disease, musculoskeletal disturbances, or any other ailments. Therefore, the following are recommended steps for the physician:

1. **Strive for accurate diagnosis and treat potentially reversible problems.** For example, mental dysfunction due to toxic side effects of medications can be improved or reversed by change or discontinuation of medications and should not be misdiagnosed as organic brain disease, requiring institutionalization.

2. **Ascertain patient function** through psychological or rehabilitation evaluation, among other methods.

3. **Determine patient goals.** Some people will want to do everything possible to stay in their homes. For them, the physician can help by prescribing and certifying home care services or special equipment. Others will have no desire or will be unable to stay in their homes; they must be sent to day care centers, shifted to live with relatives, or admitted to a nursing home.

4. **Determine family goals and expectations.** Many elderly are cared for by their families. Therefore, it is important to know the family resources, limits of their capabilities for handling a disabled person, and what they want or expect from a nursing home, day care program, or whatever.

5. **Determine realistic goals based on condition and prognosis.** Do we want to improve functional ability, psychological well-being, and independence or simply make it easier for others to care for someone?

6. **Ascertain available resources and options.** Consider what the community offers in the way of in-home, community based, and institutional services.

7. **Match patient needs with available services.** The final step is to combine the evaluation of patient needs and goals with the understanding of available services, to present a recommendation likely to meet those needs and accomplish the goals. Where possible, several options ought to be offered to the patient or family, giving them the opportunity to choose.

Many of these steps can be performed or assisted by nonmedical professionals such as social workers and nurses. The physician needs to become aware of those facts and opinions, even if he or she does not directly gather such information. A *team approach* is the hallmark of contemporary geriatric care.

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Hepatic Masses

The clinical signs and symptoms of space-occupying lesions in the liver depend on size of the lesion, whether the growth is gradual or sudden (which is usually due to necrosis and hemorrhage), location of the lesion, and presence or absence of cirrhosis. Clinical findings do not usually differentiate benign from malignant lesions unless they become palpable. The diagnosis usually is established by liver scanning and to some extent by physical examination. CT scanning is a better tool than nucleotide scanning, but it is being surpassed by Magnetic Resonance Imaging (MRI). Liver lesions can be classified as benign cysts, benign tumors, or malignant tumors.

Benign Cysts

Single nonparasitic cysts are rare and are congenital. Lahey clinic reported 11 cases over a 20-year period, and Mayo clinic had 12 cases over 50 years. These cysts originate from an aberrant bile duct, are usually asymptomatic, and the patient has normal liver function tests. Such lesions are encountered at surgery or autopsy. If symptomatic, lesions are managed surgically by unroofing them and by placing a sump drain. If a biliary fistula develops it is diverted surgically to drain internally to the small bowel by Roux-en-Y.

Polycystic disease of the liver is another rare congenital condition in which there are multiple cysts in the liver. Half these patients will have cysts in their kidneys and pancreas. These patients also are usually asymptomatic, have normal liver function tests, and the lesions are found at surgery or autopsy. If the lesions become symptomatic, the patient will develop hepatomegaly or signs of compression of other organs. Such cases are managed by unroofing.

Inclusion cysts are extremely rare and may represent a duodenal duplication in the right lobe of the liver.

Traumatic cysts can develop secondarily to mild to severe blunt trauma that leads to parenchymal injury. If they become symptomatic, the lesions are managed by drainage or resection.

Hydatid cysts are the result of infection by *Echinococcus granulosa* but occasionally by *E. multilocularis.* The cyst usually appears calcified on x-ray, which helps suggest the diagnosis. The cyst wall consists of compressed liver tissue: a laminated layer and epithelial layer. Fluid in the cyst has a high pressure and contains daughter cysts. The diagnosis is established by the Casoni test, which is the intradermal injection of hydatid fluid, giving rise to a skin reaction in 15 minutes. However, the test can be 25 percent at error. These cysts are managed surgically by careful drainage and the instillation of a high concentration of saline followed by local excision.

Benign Tumors

Cavernous hemangiomas are the most common in this category of lesions. They are usually asymptomatic but frequently are diagnosed using new imaging techniques. They can be misdiagnosed as metastasis. According to some reports they may bleed and require emergency surgery. If diagnosed in an asymptomatic stage, they can be observed, and if growth causes compression symptoms, surgical resection will be indicated.

Multiple hemangiomas are found in infants during their first year; over half are diagnosed in the first six months of life. While the liver function tests are normal, the infant will develop symptoms of arteriovenous shunting. Fifteen percent of the patients will have a bruit over the liver; 85 percent of these patients also will have cutaneous angiomas. The management varies: single ones (rare) can be resected. Multiple ones have no definitive therapy; while some physicians embolize them, others treat them with irradiation and steroids.

Hepatic adenomas are very rare in children, men, and postmenopausal women; 10 percent are multiple. There is a high incidence (fourfold increase) with the use of contraceptive pills. It has been claimed that if the contraceptive pills are discontinued, the adenomas regress. While small adenomas can be observed, large ones should be resected as they cause pain, compression, and hemorrhage (intralesional or in the peritoneal cavity). They may be misdiagnosed pathologically as hepatomas.

Focal nodular hyperplasia (also called hamartoma) is very difficult to differentiate histologically from hepatic adenomas. It consists of nodules of mature hepatocytes surrounded by biliary ductal hyperplasia or bands of fibrous tissue. It has been claimed that the incidence increases with the use of contraceptive pills. Focal nodular hyperplasia is usually 5 cm or less in diameter and should be resected. However, 10 to 15 percent are large and symptomatic or even multiple and may not be amenable to resection.

Primary Malignant Tumors

Hepatocellular carcinoma (also called hepatoma) is the most common and constitutes 90 percent of all primary liver carcinomas. It originates from the hepatocytes. Multicentric hepatomas are noted in cirrhotics.

Cholangiocarcinoma is of biliary origin. It is less common in its pure form. The patient may have high temperature of 101°F or more.

If you have any questions, call or write the Surgical Oncology Program at the University of Maryland Medical System, Room N13E02, Baltimore, Maryland 21201 (301-328-5224).

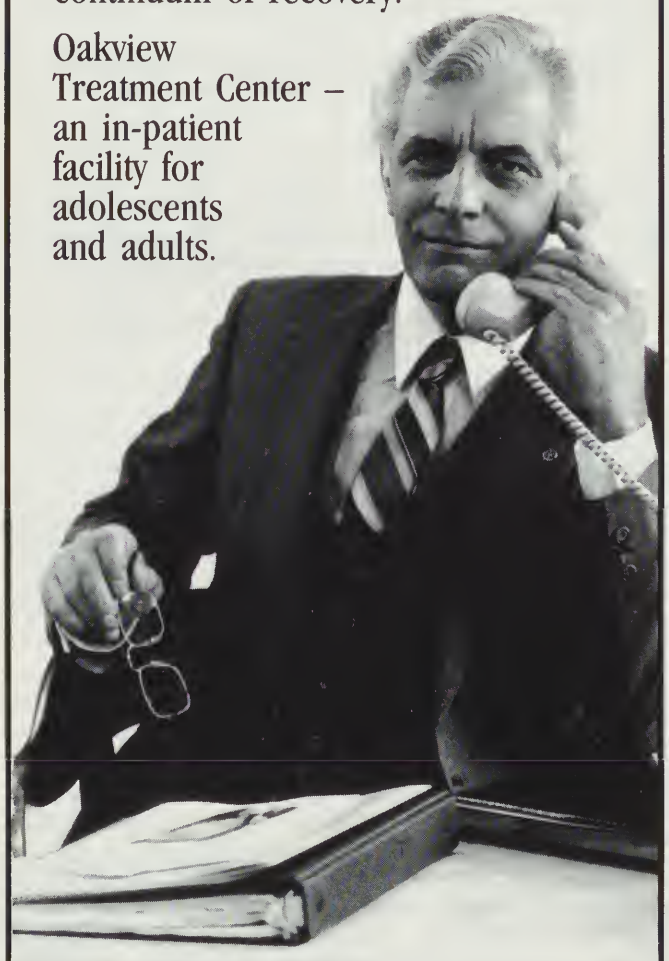
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Mixed hepatocellular and cholangiocarcinoma is more common than pure cholangiocarcinoma.

Hepatoblastoma tumors have epithelial and mesenchymal origin similar to Wilm's tumors and some uterine carcinomas. They are found in infants. They are highly curable with resection.

Sarcomas can be angiosarcomas or spindle-cell sarcomas. Like any other sarcoma, their natural behavior varies, but it is usually aggressive.

Metastatic Tumors

The liver can be the site of metastases from various primary sites and tumor types: large bowel cancers, breast cancers, melanomas, gastric cancers, pancreatic cancers, testicular cancers, sarcomas, or carcinoids.

Management

The surgical approach depends on accurate location of the tumor, extent of the disease (single or multiple), and the status of the rest of the liver. The location and extent of the disease can be accurately determined by scanning or imaging. Preoperatively the patient should have an arteriogram of the celiac axis and the superior mesenteric artery with a venous phase to determine the relationship of the tumor to the main blood supply, any anomalies in the hepatic artery, or any thrombosis in the veins. Preoperative bowel prep is essential to reduce the ammonia level.

Liver resections can vary from wedge resection to sublobar, lobar, or extended lobar resections. If the liver lesions are unresectable, that is, multiple and involving both lobes of the liver with no extrahepatic metastases, dearterialization may be considered, as the main blood supply to liver metastases is arterial. This is followed by liver infusion with chemotherapy or systemic chemotherapy. If metastases outside the liver are noted, systemic chemotherapy is in order.

Tumor Conferences are held weekly on Fridays between 8 and 9 a.m., Room #N13E28 at the University of Maryland Hospital. This is an open meeting and all physicians are welcome to present their own cases. However, they should call 301-328-5224 before Friday to schedule their cases for presentation, and they should bring the pathological slides with them.

***E. GEORGE ELIAS*, M.D.**
Professor of Surgery and Oncology
University of Maryland
Surgical Oncology Program

Sugar and Behavior

ARNOLD BRENNER MD

Hypoglycemia may be produced in a diabetic receiving excess insulin and causes a variety of neuropsychiatric symptoms, which may include sweating, anxiety, hunger, weakness, tachycardia, fatigue, headache, visual disturbances, depression, psychotic behavior, rage reactions, convulsions, or coma. A number of other pathologic states, such as insulinoma, hepatic, adrenal, neoplastic, drug-induced, and varied metabolic disorders, are well recognized to cause hypoglycemia.[1]

More controversial is the concept of functional or reactive hypoglycemia, in which a patient eating sugary foods will have a sudden, severe drop in blood glucose, simulating a psychiatric disorder. In many patients there are difficulties in corroborating the diagnosis due to inability to demonstrate an hypoglycemic level simultaneous with psychiatric symptoms and to produce symptomatic hypoglycemia during a five-hour oral glucose tolerance test (OGTT). Moreover, since a significant number of normal patients may have asymptomatic hypoglycemia during a glucose tolerance test, the underlying concept has been questioned. Critics have described it as a nondisease fad where "some physicians deliberately misdiagnose the condition to render prolonged expensive treatment."[2]

Resolution of this controversy is of more than academic interest. Five years ago a physician was brought before the peer review committee of the Baltimore County Medical Association because he ascribed a patient's symptoms to reactive hypoglycemia. At the same time in a Towson court, a patient was awarded $50,000 after successfully suing a group of internists for allegedly missing the diagnosis of reactive hypoglycemia.

By no means should a court decision constitute proof of the existence of this disorder, but a brief look at this case points out both the fallibility of the court system and the difficulty in establishing the diagnosis.

A 30-year-old male for eight years had repeated episodes of fatigue, depression, anxiety, and palpitations that incapacitated him from working. He had been seen by internists, a psychiatrist, a neurologist, and a neurosurgeon. A diabetic specialist challenged the patient to an unorthodox meal of pancakes and maple syrup; what followed was an episode resembling a seizure that was associated with a blood glucose of 20 mg/dl. The internists could not document a definitive, symptomatic hypoglycemic nadir in a 5-hour GTT, and a trial of a diet eliminating sugar may have been used. Years later the symptoms disappeared after the patient adopted an extended diet eliminating all refined sugars, corn syrup, white flour, caffeine, and alcohol. Fruit juices caused symptoms. The high-protein, low-carbohydrate diet frequently suggested[1] did not produce a feeling of well being; instead, frequent ingestion of large amounts of complex starches were necessary.

Recently, Chalew *et al.*[3] demonstrated at the University of Maryland School of Medicine that patients with "idiopathic postprandial syndrome" have elevated serum catecholamines and cortisol during an OGTT, compared to controls, and that the elevation of epinephrine best correlated with patient symptoms and not the nadir of blood glucose, which was inconsistent and unreliable.[4] This observation explains nicely why the topic has been confusing.

The University of Maryland endocrinology unit runs an elegant glucose tolerance test that monitors glucose, insulin, cortisol, and epinephrine and is helpful in identifying patients who may respond to dietary intervention. Since this test costs about $700, the clinician logically might embark on a clinical trial, reserving the above test for the more difficult cases.

The incidence of this disorder, whose name and diagnostic criteria are undergoing change, has yet to be established. Under old criteria, some physicians claim that as much as 10 percent of the population is affected.[5] The per capita yearly consumption of refined sugar is said to have risen from 8 pounds to over 120 pounds[6] since 1900, perhaps causing an increase in the frequency of postprandial hypoglycemia.

The high intake of these "empty calories" in the American diet may displace foods containing vitamins and minerals from the diet, causing nutritional depletion, such as subclinical thiamin deficiency.[7] Pragmatic physicians caring for these patients have stressed increasing the intake of B complex vitamins and minerals zinc, magnesium, and manganese.[5,6] Chromium has been found to decrease both the height and the nadir of blood glucose following oral challenge of glucose.[8] The amino acid Glutamine appears to reduce sugar cravings in many individuals and appears to aid dietary compliance in "sugar addicts."

I have seen several children with documented thiamin deficiency whose parents observed hyperactivity following ingestion of sugar. When the deficiency was treated, sugar did not cause hyperactivity. While this may be considered anecdotal, it parallels the effect of giving a thiamin-deficient alcoholic patient intravenous glucose, precipitating a Wernicke-Korsakoff syndrome.

Reviews of recent research published by agents of the food industry tend to emphasize the inconsistency in the medical literature and to minimize the harmful effects of excess sugar, as in childhood hyperkinesis.[9] Rencently, Conners[10] reported that sugar ingested following a predominately protein meal had little effect on childhood hyperactivity, but a large amount of sugar following a predominately carbohydrate meal increased

Committee on Emotional Health, Gary W. Nyman MD, Chairman; Lino Covi MD, Editor.

hyperactivity, the children having drastically increased numbers of errors of commission and omission on testing. Despite the enormous quantity of literature in this area, more work will be necessary before a consensus is reached.

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Until recently, hospitalization for four to five days was used for diabetic instruction, meal planning, etc. Now, with "utilization review" it is more difficult to justify a hospital admission for educational purposes. Other methods of diabetic education are becoming more popular.

In Maryland, Camp Glyndon for Diabetic Children has been in existence for more than 25 years. It has been very helpful in educating children with diabetes as well as their parents.

The Maryland affiliate of the American Diabetes Association (ADA) has offered brief courses in diabetes education for many years in the Baltimore area. In recent years a number of counties have established component chapters of the state affiliate and conduct courses locally.

In Prince Georges and Montgomery counties the Metropolitan DC affiliate of the ADA offers courses in diabetes education.

Many hospitals throughout Maryland operate diabetes education courses both for crisis needs of patients admitted with complications and for long-term in-depth management on an outpatient basis. Unfortunately, these educational programs vary widely in content and quality. The American Diabetes Association along with other interested organizations are setting up a standardized curriculum and instructor certification system to make these courses more worthwhile.

The ideal diabetes education course should be at least 40 hours long and include: meal planning six to eight hours (with training in "eating out"), foot care, physiology of diabetes, complications, exercise guidance, self-monitoring of blood glucose, the proper technique for administering insulin, psychological problems, etc. The course should have periodic follow-up sessions at about three-month intervals for progress review and motivation.

For some unexplained reason physicians have been hesitant to refer patients to these programs. Patients look to their physicians for guidance, but if busy practitioners have neither the time nor the facilities to conduct a good educational program, proper referral will benefit everyone.

In the rare instance of the unavailability of a program in some area, a self-taught program with the book *Learning to Live Well with Diabetes* ($22.50), published by International Diabetes Center, 5000 West 39th St., Minneapolis, MN 55416, would be most helpful. If all diabetic patients had this book for their personal review from time to time, there would be many less hospital admissions for complications.

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CHILD AND ADOLESCENT
PSYCHIATRY DIVISION

Adolescent Hypertension Update

KENNETH G. ZAHKA MD

Recent studies suggest a useful role for echocardiography in the evaluation of adolescent hypertension. Other studies consider potential risks and benefits of weight lifting for this group.

Kenneth G. Zahka MD is Assistant Professor of Pediatrics, Division of Pediatric Cardiology, Johns Hopkins University School of Medicine.

The publication of the "Report of the Second Task Force on Blood Pressure in Children" (recently reviewed in this column) is certain to generate renewed discussion of many important aspects of the diagnosis and management of children with high blood pressure.[1,2] Two particular areas where recent studies may change the clinical approach to this problem involve the role of echocardiography in the evaluation of high blood pressure and the potential risks or benefits of exercise for hypertensive adolescents.

Left Ventricular Hypertrophy (LVH) in Adolescent Hypertension: Role of Echocardiography in Diagnostic Work-up

Echocardiography provides an accurate, noninvasive means of measuring left ventricular wall thickness and left ventricular cavity size. That an estimate of left ventricular muscle mass can be calculated from these two measurements has been validated in autopsy studies. Left ventricular hypertrophy is an increase in either the left ventricular wall thickness or calculated left ventricular mass. The upper normal value of left ventricular mass is dependent on body size and is approximately 100 gm/m^2 for an adolescent. Numerous studies have documented early cardiac involvement in adolescent hypertension primarily by the identification of LVH by echocardiography.[3–6] Although it has been assumed that this is in large part due to the increased load placed on the heart by the elevation of the arterial blood pressure and that the left ventricular muscle mass should be proportional to the blood pressure, few studies have been able to establish a strong correlation between systolic or diastolic blood pressure and the degree of left ventricular hypertrophy. Explanations for this poor correlation between blood pressure and LVH have focused on the limited value of episodic office measurements of blood pressure in reflecting average daily blood pressure and thus the average load on the heart.

Devereux *et al.* have demonstrated an improved correlation between 24-hour ambulatory blood pressure recordings and LVH.[7] Peak systolic blood pressure during exercise is also better correlated with LVH than casual blood pressure measurements.[8] Both studies suggest that measurement of left ventricular mass may be particularly useful in subjects with wide daily fluctuations in blood pressure in order to assess the overall impact of the blood pressure on the cardiovascular system.

Two recent studies using echocardiography have documented increased left ventricular mass in normotensive offspring of hypertensive parents.[9–10] This raises further questions about the role of hypertrophy in the hypertensive process. Is this an indication that the average daily or monthly blood pressure may be higher in the "prehypertensive" subject? Does left ventricular hypertrophy represent a marker for future essential hypertension in the adolescent population? Is there a neurohumoral etiology for essential hypertension that produces LVH independent of the level of arterial blood pressure?

Based on available data, we recommend echocardiography as part of the evaluation of any child or adolescent with high blood pressure (greater than the 95th percentile). The rationale for this approach is based on the assumption that left ventricular mass provides an alternative and more accurate assessment of the load continuously present on the cardiovascular system than may be evident from casual office blood pressure measurements. Such an assessment may help to distinguish the child requiring pharmacologic treatment from the child for whom a conservative plan of observation and a trial of nonpharmacologic treatment would be more appropriate. The value of echocardiography in the evaluation of children with blood pressures between the 90th and 95th percentiles is less clear. It is most likely to provide useful information in the child with labile office blood pressure measurements for whom the clinician desires an additional estimate of the cardiovascular load.

Since many studies have shown regression of LVH with successful treatment of high blood pressure, the echocardiogram also may be of value to monitor the efficacy of treatment in selected patients. This would be most useful in children with blood pressures well above the 95th percentile in whom the pretreatment left ventricular mass would be expected to be most abnormal.

HBP Commentary is contributed by the Maryland Commission on High Blood Pressure and Related Cardiovascular Risk Factors, 201 W. Preston St., Baltimore, MD 21201 (301-225-5891). Editors: R. Patterson Russell MD, Past Chairman; Donald O. Fedder PharmBS, DrPH, Chairman; and Carol Lewis MPH, ScD, Executive Director.

Exercise and the Hypertensive Adolescent: Is Weight Lifting Necessarily Bad?

The cardiovascular response to a body-building type of weight lifting is staggering. In a methodologically elegant study, MacDougall *et al.* documented peak blood pressures averaging 320/250 mmHg in experienced body builders during double leg presses;[11] the blood pressure in one individual reached 480/350 mmHg. These dramatic acute elevations of blood pressure were produced by a combination of a vasopressor response and a Valsalva maneuver. While this study provided data on the short-term effect of this type of exercise on blood pressure, it did not address the long-term effects. In a study of normal subjects by Stone *et al.*, Olympic-style weight training was shown to result in small, but statistically significant, decreases in systolic blood pressure without affecting diastolic blood pressure.[12] One echocardiographic study has documented increased ventricular septal thickening in competitive weight lifters, although other echocardiographic indices of LVH were normal;[13] a long-term detrimental effect of this episodic load on the cardiovascular system was not established.

Should the impressive acute elevations in blood pressure documented in normal subjects during weight lifting be reason to restrict adolescents with high blood pressure from this popular activity? While we would discourage any hypertensive adolescent from *competitive* weight-lifting or body building requiring *maximum effort*, recent data suggest that hypertensive adolescents may benefit from a conditioning program in which weight training is included.

Hagberg *et al.* studied the effect of weight training on a group of adolescents with a history of mild hypertension who had lowered their blood pressure from a mean of 143/80 mmHg to 130/77 mmHg by endurance training (running three times a week for 30 to 50 minutes) over five months.[14] The addition of a period of weight training, consisting either of free weights or variable resistance equipment, did not significantly increase mean blood pressure. While this study does not directly address the question of the usefulness of weight training as a treatment for adolescent hypertension, it does suggest that the chronic effects of weight training in this population may not be harmful. However, the acute effects of weight training on blood pressure were not considered, nor was echocardiographic assessment of the heart performed. Until further studies become available, for mildly hypertensive adolescents who wish to lift weights it would seem prudent to prescribe a program of gradually increasing weights to a moderate load, stressing a high number of repetitions rather than extreme weights and emphasizing the importance of avoiding a Valsalva maneuver.

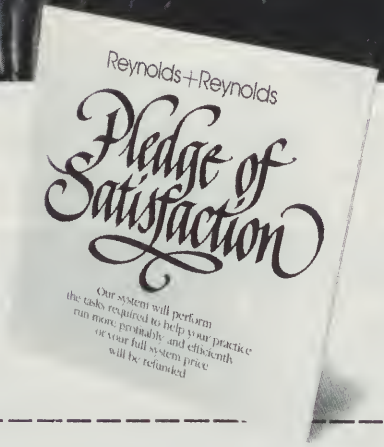
For a comprehensive review of all aspects of blood pressure in children, including definition, detection, evaluation, and management of hypertension, the reader is referred to the recently published "Report of the Second Task Force on Blood Pressure Control in Children."[1]

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Almost 20,000 of the patients in the nationwide compliance trial were identified as having been noncompliant with their previous antihypertensive therapy. Their physicians reported that 88% showed improved compliance when placed on once-daily INDERAL LA.

Control, comfort, and compliance

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INDERAL® LA
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Like conventional INDERAL Tablets, INDERAL LA should not be used in the presence of congestive heart failure, sinus bradycardia, cardiogenic shock, heart block greater than first degree, and bronchial asthma.

*After a 30-day trial with INDERAL LA, physicians reported that 90% of the patients would remain on INDERAL LA.

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NEW LOW DOSE
INDERAL LA 60 mg
(PROPRANOLOL HCl) LONG ACTING CAPSULES

Please see next page for brief summary of prescribing information.

The one you know best keeps looking better

BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR.)*

INDERAL® LA brand of propranolol hydrochloride **(Long Acting Capsules)**

DESCRIPTION. INDERAL LA is formulated to provide a sustained release of propranolol hydrochloride. INDERAL LA is available as 60 mg, 80 mg, 120 mg, and 160 mg capsules.

CLINICAL PHARMACOLOGY. INDERAL is a nonselective, beta-adrenergic receptor-blocking agent possessing no other autonomic nervous system activity. It specifically competes with beta-adrenergic receptor-stimulating agents for available receptor sites. When access to beta-receptor sites is blocked by INDERAL, the chronotropic, inotropic, and vasodilator responses to beta-adrenergic stimulation are decreased proportionately.

INDERAL LA Capsules (60, 80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with INDERAL LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of INDERAL Tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially.

INDERAL LA should not be considered a simple mg-for-mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to INDERAL LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, INDERAL LA has been therapeutically equivalent to the same mg dose of conventional INDERAL as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure and rate pressure product. INDERAL LA can provide effective beta blockade for a 24-hour period.

INDICATIONS AND USAGE. Hypertension: INDERAL LA is indicated in the management of hypertension; it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. INDERAL LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: INDERAL LA is indicated for the long-term management of patients with angina pectoris.

Migraine: INDERAL LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

CONTRAINDICATIONS. INDERAL is contraindicated in 1) cardiogenic shock, 2) sinus bradycardia and greater than first-degree block; 3) bronchial asthma, 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.

ONCE-DAILY

INDERAL® LA

(PROPRANOLOL HCl)

LONG ACTING CAPSULES



WARNINGS. CARDIAC FAILURE: Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or INDERAL should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following *abrupt* discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned, the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (eg, chronic bronchitis, emphysema) — PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY: The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, eg, dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA: Beta blockers should be used with caution in diabetic patients if a beta-blocking agent is required. Beta blockers may mask tachycardia occurring with hypoglycemia, but other manifestations such as dizziness and sweating may not be significantly affected. Following insulin-induced hypoglycemia, propranolol may cause a delay in the recovery of blood glucose to normal levels.

THYROTOXICOSIS: Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol may change thyroid function tests, increasing T_4 and reverse T_3, and decreasing T_3.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case, this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS. GENERAL: Propranolol should be used with caution in patients with impaired hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta-adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be told that INDERAL may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

CLINICAL LABORATORY TESTS: Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS: Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if INDERAL is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

Caution should be exercised when patients receiving a beta blocker are administered a calcium-channel-blocking drug, especially intravenous verapamil, for both agents may depress myocardial contractility or atrioventricular conduction. On rare occasions, the concomitant intravenous use of a beta blocker and verapamil has resulted in serious adverse reactions, especially in patients with severe cardiomyopathy, congestive heart failure or recent myocardial infarction.

Aluminum hydroxide gel greatly reduces intestinal absorption of propranolol.

Ethanol slows the rate of absorption of propranolol.

Phenytoin, phenobarbitone, and *rifampin* accelerate propranolol clearance.

Chlorpromazine, when used concomitantly with propranolol, results in increased plasma levels of both drugs.

Antipyrine and *lidocaine* have reduced clearance when used concomitantly with propranolol.

Thyroxine may result in a lower than expected T_3 concentration when used concomitantly with propranolol.

Cimetidine decreases the hepatic metabolism of propranolol, delaying elimination and increasing blood levels.

Theophylline clearance is reduced when used concomitantly with propranolol.

CARCINOGENESIS, MUTAGENESIS, IMPAIRMENT OF FERTILITY: Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

PREGNANCY: Pregnancy Category C. INDERAL has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. INDERAL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

NURSING MOTHERS: INDERAL is excreted in human milk. Caution should be exercised when INDERAL (propranolol HCl) is administered to a nursing woman.

PEDIATRIC USE: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular: Bradycardia; congestive heart failure; intensification of AV block, hypotension; paresthesia of hands; thrombocytopenic purpura; arterial insufficiency, usually of the Raynaud type.

Central Nervous System: Light-headedness, mental depression manifested by insomnia, lassitude, weakness, fatigue; reversible mental depression progressing to catatonia, visual disturbances; hallucinations; vivid dreams; an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics. For immediate formulations, fatigue, lethargy, and vivid dreams appear dose related.

Gastrointestinal: Nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: Pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: Bronchospasm.

Hematologic: Agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-Immune: In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous: Alopecia, LE-like reactions, psoriasiform rashes, dry eyes, male impotence, and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.

DOSAGE AND ADMINISTRATION. INDERAL LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily. If patients are switched from INDERAL Tablets to INDERAL LA Capsules, care should be taken to assure that the desired therapeutic effect is maintained. INDERAL LA should not be considered a simple mg-for-mg substitute for INDERAL. INDERAL LA has different kinetics and produces lower blood levels. Retitration may be necessary, especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION — *Dosage must be individualized.* The usual initial dosage is 80 mg INDERAL LA once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg once daily or higher until adequate blood-pressure control is achieved. The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

ANGINA PECTORIS — *Dosage must be individualized.* Starting with 80 mg INDERAL LA once daily, dosage should be gradually increased at three- to seven-day intervals until optimal response is obtained. Although individual patients may respond at any dosage level, the average optimal dosage appears to be 160 mg once daily. In angina pectoris, the value and safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS).

MIGRAINE — *Dosage must be individualized.* The initial oral dose is 80 mg INDERAL LA once daily. The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimal migraine prophylaxis. If a satisfactory response is not obtained within four to six weeks after reaching the maximal dose, INDERAL LA therapy should be discontinued. It may be advisable to withdraw the drug gradually over a period of several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS — 80-160 mg INDERAL LA once daily

PEDIATRIC DOSAGE — At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

*The appearance of these capsules is a registered trademark of Ayerst Laboratories.

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In-flight Medical Emergencies

W. ROBERT LANGE MD

It has been almost a year since the FAA mandated that US licensed commercial aircraft with 30 or more seats maintain a standardized emergency medical kit on board. Physicians need to be aware of and familiar with the contents of this medical kit as well as their options when assisting with a health emergency when airborne.

Dr. Lange is with the Medical Advisory Service for Travelers, Office of the Medical Advisor, The Johns Hopkins Hospital, Baltimore.

On August 1, 1986 the Federal Aviation Agency (FAA) mandated that a standardized emergency medical kit be maintained aboard all US licensed commercial aircraft with 30 or more seats. The components of the emergency medical kit are shown in the Table.

In the past inadequate records had been kept on the incidence and characteristics of medical problems occurring while flying. However, a number of reviews describe potential risks.[1–5] Because of the dearth of statistics, FAA decreed that better records be kept detailing in-flight medical emergencies. One point is clear: assessment and therapeutic intervention had been woefully inadequate. It has been estimated that on as many as one in 50 international commercial flights a medical emergency will warrant some medical attention and that the probability of a physician being on board such a flight is better than 50 percent. Physicians' response to the FAA mandate was overwhelmingly in favor of improving on-board medical supplies, with 96 percent favoring the decision. The FAA considered including a defibrillator as well as parenteral sedatives and narcotics, but was dissuaded when several influential professional organizations raised concerns about potential misuse. The AMA had recommended inclusion of ambu bags, a laryngoscope, endotracheal tubes, and other additional supplies. It was decided the situation would be reviewed after two years, and at that time additional modifications would be considered.

Airline Obligations/Physician Options

Airlines and their flight crews are not legally obligated to tend the medical needs of passengers. The only decision a pilot must make is whether to divert the flight to the nearest airport able to accommodate the plane. On domestic flights, it has been estimated that a flight can be diverted, the plane safely landed, and an ill passenger delivered to an awaiting ambulance within 30 to 40 minutes. Because of the inconvenience as well as the considerable financial expense associated with such action, the decision to divert is not made lightly, and pilots generally will seek the voluntary services and advice of a physician passenger.

In this country physicians are under no legal obligation to volunteer although in certain situations abroad they may be. Nevertheless, it is unlikely that US physicians would have charges pressed against them for not volunteering their services in an emergency. It is anticipated that as long as the sick passenger was not billed for services rendered, "Good Samaritan" laws would be applicable; and in the absence of gross negligence, no professional liability would be incurred, particularly if the services were compatible with the standard of care appropriate for the specialty.

All US states have good samaritan laws, and prevailing opinion suggests that a state's law would apply to its airspace. The liability issue is a complex variable, one that might well vary in different geographic regions and would be left up to the courts to decide. A national good samaritan law is bogged down in Congress. Available evidence suggests that most physicians feel a certain moral obligation to assist and generally will do so.

The options available to an assisting physician are (1) manage the situation with the available supplies, (2) recommend that the pilot seek permission to descend to a lower altitude (at 22,500 feet the onboard compressor will be able to maintain a cabin pressure roughly comparable to sea level), (3) request medical consultation via the aircraft's radio equipment, or (4) instruct the pilot to divert the flight.

In-flight Complaints

Many seemingly minor medical complaints are accentuated by the stress of commercial air travel, and many other symptoms are solely stress related. A study by the Boeing Corporation concluded that one of every four persons develops an appreciable "aviophobia" at some point in their life, and that this fear of flying either precludes their willingness to fly at all or pro-

Table. Emergency Medical Kit

Sphygmomanometer	1
Stethoscope	1
Airways, oropharyngeal (3 sizes)	3
Syringes (sizes necessary to administer required drugs)	4
Needles (sizes necessary to administer required drugs)	6
50% Dextrose injection, 50 cc	1
Epinephrine 1:1000, single dose ampule or equivalent	2
Diphenhydramine HCl injection, single dose ampule or equivalent	2
Nitroglycerin tablets	10
Basic instructions for use of the drugs in the kit	1
First Aid Kit (includes flashlight)	1

duces some anxiety related symptoms when they elect to do so.

Hyperventilation has been suggested as the most frequently encountered cause of distress during commercial air flight.[5] The diverse symptoms of respiratory distress including air hunger, dizziness, paresthesias, and often chest pain can mimic serious cardiovascular, pulmonary, and neurologic disease. Treatment consists of reassurance and rebreathing into a closed space to increase the arterial pCO_2 level. If a conventional paper bag is not available for this purpose, an oxygen mask not connected to an oxygen supply or an emesis bag will suffice.

Dyspnea, chest pain, or abdominal pain not the result of hyperventilation should be treated initially with supplemental oxygen. Chest pain that could be anginal should be managed with sublingual nitroglycerin at five-minute intervals. Close hemodynamic monitoring and exact physical examination are generally not possible while airborne. Vibration and background cabin noise make subtle auscultation difficult, and the accuracy of blood pressure readings at altitude has been questioned. If symptoms are not relieved within 10 to 15 minutes, the plane should be diverted because of the possibility of an evolving myocardial infarction. Whenever a flight is diverted, the physician should ascertain that information has been radioed ahead to assure that an ambulance has been summoned and that the receiving health care providers know the nature of the problem, the status of the patient, and the treatment that has been provided.

Persistent shortness of breath or severe abdominal pain, which may be secondary to expansion of gas in a hollow viscus, may improve with a drop in altitude. Because the etiology may not be certain, persistent and certainly worsening discomfort warrants diversion. Asthma and severe allergic reactions can be treated with a subcutaneous injection of the 1:1000 epinephrine. Follow-up management of allergy and treatment of severe motion sickness can be undertaken with 25 to 50 mg of diphenhydramine intramuscularly.

Simple fainting that responds to head lowering requires only observation, but persistent lethargy or alteration in mental status warrants further intervention. Supplemental oxygen should be administered, questioning of travel companions pursued, and a search for medic alert identification undertaken. If any suspicion of diabetes remains, 50 cc of 50 percent dextrose should be administered intravenously, using the sphygmomanometer pumped to 30 to 50 mmHg as a tourniquet. If the patient does not respond, the flight should be diverted. An isolated seizure might be managed with descent, oxygen, and observation, but recurrent or persistent convulsions mandate immediate diversion of the flight.

An unresponsive patient should be placed in a modified lateral decubitus position across a row of seats with the arm rests retracted. An oral airway should be inserted if there is labored or irregular breathing, and oxygen should be administered. If CPR is indicated, the patient should be placed on the floor of the cabin, preferably in a galley area or in a crosswalk on widebody aircraft. The rescuer performing the ventilations should take breaths from an oxygen mask. It has been recommended that it would be reasonable to inject 0.5 to 1.0 cc of 1:1000 epinephrine every five minutes into a distended vein, the sublingual venous plexus, or (less desirable) intramuscularly into the deltoid during continued CPR efforts.[5]

The FAA is interested in learning physician reaction to the emergency medical kit. Responses can be directed to the Federal Aviation Administration, Office of Aviation Medicine, 800 Independence Avenue S.W., Washington, DC 20591.

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Editorial

More on In-flight Emergencies

JAMES G. ZIMMERLY MD, JD, MPH

The preceding article by Dr. W. Robert Lange on in-flight emergencies should be of interest to all physicians who travel the friendly skies. To date, I am not aware of a single reported case in the legal literature against an airline or an airline attendant arising out of an in-flight medical emergency. Claims do arise from time to time, but few result in litigation and even fewer result in reported decisions. For many years both the various pilot associations and the cabin attendants associations have supported the passage of a national "Good Samaritan" statute with no success.

The question becomes whether this life-saving medical equipment now required on most commercial flights will create additional liability situations. It may well do so. Regardless, if it saves a few lives, it is a good idea. With this new obligation will come higher standards of medical practice involving the treatment of in-flight emergencies.

The more equipment the airlines carry and the better trained their cabin attendants and crew, the greater potential for liability because they have now assumed a higher standard of medical care. Any deviation from that higher standard could result in liability. With the stocking of life-saving drugs and equipment comes the responsibility to maintain those drugs and equipment. I can envision an ambu bag (which is not included in the present mandated equipment) falling apart from dry rot as the crew tries to use it—all this occurring in front of 150 witnesses.

If crew attendants are trained in basic CPR but don't perform it properly, I can envision a case made against the airline. Emergency medical technicians, trained in CPR have had malpractice claims filed against them based on their inappropriate performance of the CPR. In one instance, the CPR was carried out on a bouncing bed instead of the floor or other hard surface. If a flight attendant performed CPR on a patient stretched out on a row of seats, there could be a similar claim of negligence. I doubt whether any flight attendant would perform CPR more than once a year. Under those circumstances, it is difficult to remain proficient. Additionally, it is next to impossible to perform good CPR on an aircraft because of the cramped quarters.

Some major airports now hire cardiac rescue technicians to work at the airport, and this has improved the level of emergency care available close to the scene. I know of one major airport in the east that has set aside a room as a lounge for the staff of a local hospital to use while traveling through this airport in order to have their expertise available for any emergencies.

Criminal and Civil Liability

If a plane is on the ground in a state where the physician is not licensed to practice medicine and he or she treats a patient, he or she is potentially at risk of criminal liability for practicing medicine without a license and civil liability if the patient is injured by the treatment. As a practical matter, it is very unlikely that criminal sanctions would be applied against a good samaritan. As far as the civil liability aspect, if the physician errs and a patient sues, the physician can expect to be held to the standard of practice of the location where the treatment took place. In addition to the physician's liability, the airline may also be liable since the captain controls everything within his or her aircraft. The state of Vermont has long required a person to stop and render care at the scene of an accident. This applies to all persons, not only health care providers. The health care practitioner might limit the treatment in this setting to first aid, including establishing an airway, circulation, and stopping bleeding. Now additional medications will be available and can be used as long as the practitioner is comfortable in their use.

I am not certain Dr. Lange's statement that the law of the state in whose airspace you are traveling would be applied. The law of the jurisdiction where the plane is based or was doing business might be applied. The law of the jurisdiction at the point of departure or the point of the destination might be applied. The bottom line is that I would not concern myself with being charged with practicing medicine without a license no matter whose airspace the aircraft was in.

Dr. Lange's comment regarding billing such emergency cases needs emphasis. The little protection that you have from Good Samaritan statutes usually is lost if the patient is billed. That would be considered poor form. How about sending a bill to the airline? I would not do that either; I do not believe the airline would be responsible for the patient's medical bill, since the airline is not under an obligation to assume the medical care of the patient.

Federal proposals to provide immunity from civil liability to health care providers and crew members who treat passengers has been introduced in every legislative session for the past ten years. Perhaps some year it will pass; the prognosis at the moment is not good. Those interested in seeing such legislation enacted would be advised to encourage their legislators to push for hearings during the current session of Congress, thereby establishing a record of legislative action for a future Congress.

FAA's Position

Of interest is the fact that the Federal Aviation Administration (FAA) fought the development of medical emergency kits for use in aircraft. The FAA argued that they lacked the statutory authority to institute rule

making that would upgrade the quality of first-aid kits carried aboard commerical aircraft. It was not until a 1983 decision of the Court of Appeals for the District of Columbia's circuit in *Bargmann* v *Helms* that the court held that the FAA did have such authority pursuant to its statutory mandate to regulate safety.[1] The decision of the Court of Appeals did not require the FAA to develop rules requiring the use of upgraded emergency equipment. The decision merely held that the FAA had the statutory authority to proceed with rule making on the subject if it deemed such action advisable on the merits. They finally have deemed such action advisable on the merits, and we now have a few life-saving drugs on board commercial aircraft.

When the FAA did get around to recommending an upgrading of emergency medical equipment in their proposed rules in March 1985, they recommended many more drugs than are presently included in their final listing.[2] As Dr. Lange notes, after two years of experience, this area will be revisited. Under the FAA regulations only those in-flight medical emergencies that result in use of the medical emergency kit are required to be reported.[3] The AMA's Commission on Emergency Medical Services has recommended in years past that physicians even consider carrying their own personal in-flight medical kits but has advised that only those emergency drugs and instruments be carried that the physician feels competent in using.[4]

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Reevaluation of External Cephalic Version

VALERIE A. SORKIN-WELLS MD, W. SCOTT TAYLOR MD, and PHILLIP J. GOLDSTEIN MD

Using external cephalic version (ECV) to convert breech fetuses to vertex presentations is controversial. The morbidity and mortality of vaginal breech delivery has resulted in increasing use of cesarean sections for such infants. Because cesarean section is associated with significant increased maternal morbidity and mortality, ECV should be considered as an alternative to abdominal delivery for breech. In our experience with ten consecutive patients, there was no morbidity as a result of our versions.

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In recent years the cesarean section rate has increased dramatically. There are many reasons for this phenomenon, but the management of the breech fetus, which emphasized cesarean birth to decrease fetal trauma, is a major one. It seems prudent then to reevaluate external cephalic version as a means of decreasing both fetal and maternal morbidity.

Though the concept of ECV is not new, the practice remains controversial.[1] Previous experience with ECV led to two conclusions: the success rate decreases as term is approached and the earlier in gestation the attempt, the less trauma to the fetus. At the time the negative experiences were recorded, there were limited aids available to appraise the suitability of the procedure in a given patient and to evaluate the effect of the procedure on the fetus. However, availability of tocolytics, ultrasound, and electronic fetal monitoring in recent years mandates a new evaluation of this modality, especially in late pregnancy.

Historical

As early as 1964, Morgan and Kane noted, in an analysis of over 16,000 breech births, that the incidence at term was 3 to 4 percent and that the overall perinatal mortality rate when corrected for prematurity and limited only to babies weighing over 2600 grams was 3.5 times that expected.[2] Breech fetuses are at increased risk for low birth weight, as well as congenital malformations, birth injury, and birth anoxia. In the years since Morgan and Kane's report, advances in perinatal medicine have succeeded in rescuing many low birth weight infants who previously would have died, but the perinatal mortality rate remains unacceptably high for this group. A general appraisal of the risks encountered in breech delivery can be found in Table 1.[3-6] Of special note is the extraordinary increased incidence of birth injury in breech delivery, especially when compared to spontaneous vaginal delivery.

As early as 1959 cesarean section was advocated as the primary mode of delivery in breech presentation at term.[7] The rates of maternal morbidity and mortality precluded this recommendation from becoming absolute. Although operative risks to the mother have decreased markedly in the past 27 years, cesarean section is still associated with significant hazard and a several-fold increase in maternal mortality and morbidity.

Van Dorsten *et al.* reported in 1981, the effects of ECV with tocolysis in pregnancies greater than 37 weeks.[8] Exclusions in the randomized-controlled trial included contraindication to a tocolytic agent, predisposition to uteroplacental malfunction, premature labor or premature rupture of membranes, suspected intrauterine growth retardation, previous uterine surgery, multiple gestation, and third trimester bleeding or known placenta previa. In addition, normal real-time ultrasound examinations and reactive nonstress tests were a prerequisite. There were 25 subjects and 23 controls, all of whom were evaluated at term (Table 2). Transient deceleration occurred in 36 percent during or after the version. One deceleration persisted warranting delivery, but there were no adverse outcomes.

A similar prospective randomized control trial of ECV with tocolysis was reported in 1983 by Hofmeyr *et al.* using 30 study subjects and 30 controls.[9] Their unsuccessful version rate was 33 percent and compares to the Van Dorsten rate of 32 percent.[8] The success rate is similar, but the disparity in c-section rates in the control groups differs from 78 percent in Van Dorsten's U.S. study to 43 percent in Hofmeyr's South African study and likely reflects differences in management philosophies. Similar results have been reported by Sellappah *et al.* in 1984.[10]

Table 1. Appraisal of Risks in Breech Delivery

	Breech (percent)	Cephalic (percent)
Low birth weight	30	10.0
Congenital anomaly	6	2.0
Cord prolapse (excluding frank breech)	5 to 10	0.5
Birth injury	1.75	14.4 (midforceps) 1.3 (low forceps) 0.21 (spont. del.)

Table 2. Van Dorsten Study

Study (N = 25)

Successful version	Unsuccessful version	
(17)	(8)	
68%	32%	
(persisted)	(persisted)	
c-section	c-section	vaginal delivery
(1)	(6)	(2)
6%	75%	25%

c-section rate for entire study group = 28%

Control (N = 23)

Spontaneous conversion	Persistent breech	Transverse
(4)	(18)	(1)
17%	78%	5%
	c-section	
	(17)	
	74%	

c-section rate for entire control group = 78%

Table 3. Sinai Patient Data

(N = 10)

Maternal data	**Years**
Age range	22–39
Primigravid	5
Multigravid	5
ECV attempts	15
Conversions	11

Outcome by presentation in labor

	Vaginal*	**C-Section**
Vertex	5	1
Breech	1	3
Total	**6**	**4**

* Average birth weight for vaginal deliveries 8 lbs. 2 ozs.

Sinai Study

Ten consecutive patients were admitted to the study when fulfilling the following criteria: single fetus in breech presentation, appropriate for gestational age at 35 weeks or greater, known last menstrual period (documented by ultrasound on more than one occasion), with no placental abnormalities, such as placenta previa. Patients with multiple gestation, fixed or immobile breech, premature rupture of membranes, and oligohydromnios were excluded. Previous cesarean section without complication in the postoperative period was not excluded.

Method

After ultrasound evaluation and signed informed consent, the patient emptied her bladder and was placed in 5°–10° Fowler's position. Tocolytic or analgesic drugs were not used. Although an IV was occasionally not started, the current standard of care demands one for rapid access to maternal circulation should an untoward event occur. There were no untoward events in this group of patients. Fetuses were monitored only with intermittent Doppler or real-time ultrasound.

There were never more than three attempts in a patient, and in only one patient was suprapubic pressure used to dislodge the presenting part. If there was any evidence of distress on Doppler or real-time sonographic monitoring the procedure was discontinued temporarily until recovery occurred. "Success" or "failure" of the procedure was defined by the presentation of the fetus at the time the mother was admitted in labor.

A roll maneuver was preceded by thorough palpation of the entire uterine fundus to allow the physician to correlate the information from sonographic images and to create a three-dimensional mental image of the uterine contents. Then by gentle and persistent pressure on the fetal head, a rolling maneuver was initiated to swing the fetus through the shortest possible arc, either a forward or backward somersault. If there was resistance to the initial pressure exerted, pressure was then applied in the opposite direction. Once the roll maneuver was begun, the second hand exerted pressure on the breech in the corresponding opposite direction. It is essential that the manipulator continues to be aware of the three-dimensional nature of the maneuver, since there is often some torsion in the longitudinal or oblique axis necessary to complete the roll.

Results

Demographic data concerning the patients are shown in Table 3. The patients ranged in age from 22 to 39 years old. There were five multigravid patients and five

primigravid patients. Two of the multigravid patients had had cesarean sections for previous breech. There were a total of six patient "successes," with one patient being converted three times and one patient twice. There were four patient "failures." One failure had been successfully converted from breech to vertex on three occasions at 35, 36, and 37 weeks. While six successful patients were admitted as vertex presentations, only five of these delivered vaginally, one having a cesarean section for failure to progress in labor. Although there were three cesarean sections for breech, one breech was delivered vaginally at the patient's request for such an attempt after rapid progressive labor.

The neonates' mean weight was 7 lbs. 5 ozs. (5 lbs. 4 ozs. to 10 lbs. 1 oz.). The smallest infant was a failed ECV (a persistent breech) and was delivered by section after maternal trauma two weeks later. A significant maternal-fetal bleed (neonatal hematocrit <30 percent) occurred, and the child now has cerebral palsy. The next smallest (6 lbs. 3 ozs.) was a successful ECV who was delivered vaginally but was born with multiple congenital malformations and died at nine months of age of a malignant neuroblastoma. No children experienced any distress that could be directly attributed to the procedure.

Discussion

The group from USC[11] has reported an updated prospective randomized study involving 148 patients and 23 controls (Table 4). By now this group has added oligohydramnios and engaged, immobile presenting part as contraindications.

The cesarean section rate was 24 percent in the study group (24/102) and 74 percent in the control group (17/23). Failure to progress (17), fetal distress (5), and abnormal lie (2) were the indications for the sections in the study group. Complications included positive Kleihauer-Betke tests in 4.1 percent (all had good outcome with no evidence of abruptio placenta at delivery), transient fetal heart rate changes in 39 percent, and prolonged deceleration in 1.4 percent requiring immediate delivery (the infant had a velamentous cord insertion). One fetal death occurred three weeks postpartum and was unrelated to the procedure. One maternal death occurred four days after the procedure, the result of chorioamnionitis, sepsis, amniotic fluid embolism, and disseminated intravascular coagulation. Membranes had been ruptured only three hours prior to delivery.

Unfortunately the Hofmeyr study[9] included some nonrandomized patients, so a comparison of the four studies cited here would not be precise, but the message in all studies is the same.[8–11] ECV does lead to decreased cesarean section rates of from 18 percent to 46 percent and appears to be a safe procedure when performed on properly selected patients.

Table 4. Stine Study

Study (N = 148)

Successful version		Unsuccessful version	
(108) 73%		(40) 27%	
persisted	reverted to abnormal lie	c-section	vaginal delivery
(95) 87%	(7) 6%	(36) 90%	(4) 10%

overall c-section (24) 24%

Controls (N = 23)

c-section (17) 74%

Indeed the procedure has the potential for complications including abruptio placenta, cord accident, and maternal trauma. The major experience of Bradley Watson questions the safety of the procedure.[1] He reported eight stillbirths (<1 percent) in 866 third-trimester patients, but the number of congenital malformations in the group is not stated nor is their gestational age. In addition, version was done under general anesthesia in some cases, high-dose sedation of up to 150 mgms of meperidine in other cases, and no ultrasound or continuous monitoring was used. Lastly, his reported perinatal death rate of 0.53 percent for breech deliveries is a uniquely low experience and begs the issue of breech morbidity.[1]

The major departure of our study from previous studies was the inclusion of two patients who had previous cesarean sections. Although that might seem controversial, the patients in our study were highly selected. Both were multigravid, well-informed women whose previous cesareans had been for breech presentation. Successful and safe vaginal delivery after previous cesarean section has been documented. We do not use tocolytics because the uterine relaxation afforded by the drugs is likely to increase the risk of uterine and fetal trauma. In the absence of tocolytics, there is no tendency on the part of the operator to use excessive force, and at the earliest sign of resistance to rotation the maneuver is discontinued. It seems reasonable to assume that the uterine trauma of an ECV is less than that of labor leading to vaginal delivery.

Conclusions

Although this was not a controlled study, our expe-

rience supports the fact that in properly selected patients, ECV may be accomplished safely and successfully as an outpatient procedure. This maneuver can decrease cesarean section at term for apparent breech presentations by approximately 20 to 45 percent.

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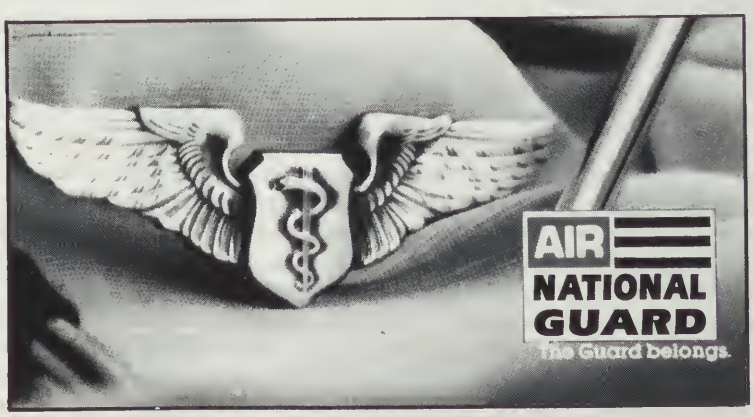
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Excessive Protein Intake: A Common Cause of False-Positive Neonatal Screening for Tyrosinemia

DENNIS W. BARTHOLOMEW MD, MARK BATSHAW MD, MICHELE D. WILSON MD, and GREGG SEMENZA MD

Two three-week old infants had elevated plasma levels of phenylalanine and tyrosine on the Maryland State Newborn Screening Test. Further investigation showed these were false-positive tests as a result of excessive protein intake in the form of evaporated milk. Resumption of a normal protein intake led to a complete resolution of the abnormalities. Maryland is one of the few states that screens newborns for Tyrosinemia Type I.

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Mass screening for elevated blood tyrosine levels in neonates currently is confined to a few state programs in the United States because there is controversy whether the program is cost effective. The introduction of "humanized" infant formulas and the increased popularity of breast-feeding have markedly reduced the incidence of transient asymptomatic neonatal tyrosinemia[1] identified by this test. Nonetheless, the incidence of false-positive elevations in tyrosine far exceeds the number of patients detected with the target disease, fumarylacetoacetase deficiency[2] (tyrosinemia type I: McKusick 27670).[3]

Case Reports

We report cases of two infants with prominent tyrosine elevations found by Guthrie bacterial inhibition assay on routine screening at three to four weeks of age.

Case A A seven-week-old male was referred to the Pediatric Genetics Clinic at The Johns Hopkins Hospital for evaluation of an elevated blood tyrosine and phenylalanine level on the three-week state newborn screening test. He was the 2,470 gram product of an unremarkable term gestation delivered vaginally to an unmarried 17-year-old gravida 1 after a six-hour labor. He was discharged home on the third day of life on feedings of Similac two to three ounces every four hours (3.2 gm protein/kg/day). The initial blood filter paper screen for elevations in methionine, phenylalanine, and leucine performed at three days of age were normal, as were assays for T4, hemoglobin, galactose-l-PO_4 uridyl transferase, and biotinidase. At home he was well, without irritability, emesis, poor feeding, or hyperventilation. However, the repeat blood filter paper screen at three weeks of age showed a tyrosine level of >20 mg% (1100 μM), while the maximum acceptable level for screening purposes in Maryland is 11 mg%. The phenylalanine level was also markedly elevated at >10 mg% (600 μM). The infant was gaining weight, and a dietary history by the mother revealed that the baby was allegedly receiving about 30 ounces of Similac/day (3.4 gm protein/kg/day). Plasma amino acids were assayed twice over the following week (Table 1) and were remarkable for a generalized aminoacidemia despite a four to five hour fast. Of particular note were increases in proline to 870 μM (normal 51–271 μM), alanine to 515 μM (normal 136–440 μM), glutamate to 188 μM (normal 15–85 μM) and tyrosine to 210 μM (normal 20–108 μM). Gas chromatography of the urine did not reveal any unusual organic acids, and a urine metabolic screen with nitrosonaphthal for tyrosine metabolites was negative.

At the time of evaluation, the infant was at the 10th percentile for length, weight, and head circumference. He appeared contented and well hydrated; there was no organomegaly. He showed good tone, suck, brief eye fixation, and spontaneous smiling. Vital signs were normal. Urinalysis was unremarkable with no ketonu-

Table 1. Plasma Amino Acid Patterns While Being Fed Undiluted Evaporated Milk and Similac

Amino Acid (μM)	Evaporated Milk* 5/19/86	6/5/86	Similac** 6/11/86	Normal Range (±2 SD)
Aspartate	26	24	17	1–17
Threonine	191	196	150	24–160
Serine	131	174	139	67–171
Asparagine	80	83	50	28–96
Glutamate	188	177	95	1–85
Glutamine	534	532	670	337–673
Proline	870	701	167	51–271
Glycine	169	183	234	87–323
Alanine	515	447	261	136–440
Citrulline	54	45	46	10–34
Valine	457	431	144	78–326
Cystine	36	40	45	44–96
Methionine	73	73	37	1–49
Isoleucine	117	125	43	21–89
Leucine	216	240	80	40–172
Tyrosine	210	179	62	20–108
Phenylalanine	111	90	42	25–81
Ornithine	123	117	63	22–94
Lysine	252	287	125	69–205
Histidine	80	103	70	37–125
Arginine	45	83	63	15–111

* 8–10 gm protein/kg day.
** 3 gm protein/kg/day.

ria. Arterial blood gas in room air had a pH of 7.34, a pCO_2 of 29 mmHg, a pO_2 of 117 mmHg, and a bicarbonate of 15 mEq/L. Electrolytes were unremarkable except for a total CO_2 of 14 mEq/L, a BUN of 21 mg/dl, creatinine of 0.4 mg/dl, calcium of 10.8 mg/dl, phosphate of 7.7 mg/dl, and a total protein of 6.0 gm/dl. The aspartate aminotransferase was 27 U/L, and the alanine aminotransferase was 14 U/L, which are normal. There continued to be a generalized aminoacidemia. As the elevated BUN and amino acid pattern suggested excessive protein intake, further historical information was obtained. We discovered that the maternal grandmother was actually responsible for preparing the baby's feedings, and unknown to the mother, she had discontinued Similac after two weeks of age because of "constipation" and in its place was using undiluted Pet evaporated milk. Since the protein concentration of (undiluted) Pet milk is 2.14 gm per fluid ounce (vs. 0.45 gm per fluid ounce in Similac), an average daily intake of only 15 to 20 ounces per day provided the baby with 8 to 10 gm of protein/kg/day. The Pet milk was discontinued and Similac formula was reinstituted, providing about 3 gm protein/kg/day. After five days, a repeat laboratory work-up revealed normal electrolytes, BUN, arterial blood gases, and plasma amino acids. A filter paper sample for succinylacetone, a byproduct of impaired fumarylacetoacetate hydrolysis, was negative.[4]

Case B A six-week-old male also referred to Pediatric Genetics Clinic for evaluation of an elevated phenylalanine and tyrosine on the three-week newborn screening test was the 2,610 gram product of an unremarkable 37-week gestation delivered vaginally to a 23-year-old gravida 2, para 1. He was discharged home on the third day of life on a diet of Similac, and his initial newborn screening test at three days of age was normal. His diet was changed to Pet milk at four days of age, and he continued to feed normally. At his well-baby exam at three weeks of age, a second blood filter paper specimen for newborn screening was obtained, which revealed a phenylalanine of 12 mg% and tyrosine of 20 mg%.

The physical examination was entirely normal except for oral thrush. The infant had gained over 1 kg in weight since birth. Screening serum chemistries and liver function tests were normal. Plasma amino acids were drawn and revealed a phenylalanine of 115 μMOL/L (normal 25–81), a tyrosine of 184 μMOL/L (normal 20–108), and methionine of 80 μMOL/L (normal 15–49). Leucine, isoleucine, valine, alanine, proline, hydroxyproline, lysine, glutamate, threonine, and histidine were also evaluated, while cystine remained low at 20 μMOL/L (normal 44–95).

By history, the infant was consuming about 32 ounces per day of diluted Pet milk, and the estimated total protein intake was about 7 gm/kg/day. The feeding history, physical examination, and amino acid pattern suggested transient tyrosinemia due to overfeeding of protein. The child was placed on an electrolyte oral solution for 18 hours, and a subsequent amino acid analysis showed that the tyrosine, phenylalanine, and methionine had returned to normal, while the generalized mild aminoacidemia had disappeared. Despite recommendations for normal infant formula, the mother resumed feeding with Pet milk, and both phenylalanine and tyrosine gradually climbed over the next two weeks. She was again advised to change the infant's diet to decrease the protein intake. The child was restarted on Similac and has continued to do well.

Discussion

Newborn screening for elevated tyrosine has been performed in Maryland since 1981, and over 250,000 patients have been screened. Despite at least 50 positive initial screening tests, only one documented case of Tyrosinemia Type 1 has been identified.[5] Hepatic injury and prematurity are common causes of false-positive screening tests, though many are attributed to so-called transient asymptomatic tyrosinemia of infancy. This aberrancy seems to be a combination of transiently decreased activity of the tyrosine degradation enzymes, parahydroxyphenylpyruvate oxidase and tyrosine aminotransferase, and a protein intake of at least 2 gm/kg/day.[1] For this reason, states that screen for elevated tyrosine now delay testing until the infant is at least three weeks old. Controversy still exists over the range of normal in tyrosine values in the neonatal period.[2]

Infant feeding practices undergo frequent reevaluation in pediatrics. While the current recommendations for dietary protein in infants suggest an intake of no less than 1.8 gm/kg/day (and a maximum of 4.5 gm/kg/day), the actual protein requirement is almost certainly less.[6] Breast-fed infants average an intake of about 1.3 gm protein/kg/day in the first three months of life while formula-fed babies receive at least twice this amount. Although breast milk contains only about 0.9 gm% protein compared to 1.5 gm% in standard infant formulas, it has a much higher proportion of nonprotein nitrogen, much of it in the form of urea. Approximately 20% of breast-milk protein, in the form of lysozymes, lactoferrin, and secretory immunoglobulin A, is unavailable for nutrition as it is relatively resistant of digestion. Thus, utilized protein may be less than 0.8 gm%. Janas *et al.* have demonstrated that breast-fed infants have significantly lower levels of blood urea nitrogen and most amino acids when compared to their formula-fed controls.[7]

The variations in plasma amino acid levels are a direct reflection of the amino acid content of the ingested proteins. About 80 percent of cows' milk protein is in the form of casein, while the predominant proteins in human milk are whey, such as lactalbumin. Caseins have a high content of glutamate, proline, tyrosine, and phenylalanine and a relative paucity of cystine. This was reflected in the plasma amino acid profiles of our patients. While the protein content of breast milk may vary considerably from person to person, relative proportions of amino acids are similar and show significant differences when compared to cows' milk (Table 2).

Evaporated cows' milk at one time was considered an acceptable source of infant nutrition. It is economical, easily available, does not require refrigeration of intact cans, and is more easily digested than whole cows' milk.[8] Yet, compared to cows' milk formulas and human milk, it is clearly much higher in protein content, even after dilution to a concentration of 20 calories per ounce. Diluted evaporated milk is no longer recommended for infants less than six months old. Needless to say, undiluted evaporated milk has never been recommended.

Protein overfeeding may not have serious consequences for otherwise healthy term infants, but it is more likely to be harmful in the premature infant where consequences can range from the subtle "protein fever" of dehydration to mild hyperammonemia and metabolic acidosis.[9] In our patients, an elevated blood urea nitrogen was combined with a compensated metabolic acidosis and an abnormal amino acid pattern that suggested protein excess. Despite the moderate increase in tyrosine, the absence of hepatorenal dysfunction, marked tyrosyluria, or a large elevation in methionine implied that these infants were not affected with Tyrosinemia Type 1.[1] The dramatic resolution of the biochemical abnormalities on a diet of 3 gms of protein/kg/day essentially ruled out other inborn errors of tyrosine metabolism such as Hawkinsinuria[10] or Richner-Hanhart syndrome.[11]

The significance of a transient elevation in plasma tyrosine in a newborn may depend on its duration. Mamunes *et al.* studied 15 term infants with transient tyrosinemia (mean tyrosine level 25.8 mg%) of an average duration of 50 days, at four to five years. Statistically significant lower scores on the McCarthy Scale of Children's Abilities and the Illinois Test of Psycholinguistic Ability were noted in these children when compared to controls matched in age, race, sex, diet, socioeconomic status, and locale. Further, these scores varied inversely with the duration of tyrosinemia (greater or less than 45 days).[12] Our patients, with a presumed duration of tyrosinemia of approximately 40 days, may be at increased risk for the subsequent development of a learning disability.

Table 2. Composition of Pet Evaporated Milk, Cows' Milk-Based Infant Formula (Similac), and Human Milk

	Evaporated Milk (undiluted)	Similac	Human Milk
Protein (gm/L)	71.3	15.0	9.0
Carbohydrate (gm/L)	105.0	72.3	70.0
Lipid (gm/L)	79.3	36.0	38.0
Calories (kcal/L)	1400	700	600
Amino Acids (mg/L)			
Asparatate	5433	1163	1160
Threonine	3233	640	500
Serine	3900	740	690
Arginine	2600	484	450
Glutamate	14966	2982	2300
Histidine	1933	310	220
Proline	6933	1310	800
Glycine	1500	283	—
Alanine	2466	480	350
Cystine	666	130	220
Valine	4800	810	700
Methionine	1800	420	250
Isoleucine	4333	730	1000
Leucine	7000	1410	680
Tyrosine	3466	605	610
Phenylalanine	3466	730	680
Lysine	5666	1070	730
Tryptophan	1000	190	180

Summary

We conclude that one of the most common causes for a positive newborn screening test for tyrosinemia in an otherwise healthy term infant is excessive protein intake. Careful history taking may reveal the use of evaporated milk or improperly diluted infant formula concentrates. All biochemical abnormalities in such infants should resolve within 72 hours of resuming a normal diet. Imprudent prolonged use of high-protein diets in infants may have deleterious immediate or long-term consequences.

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RAYMOND D. BAHR MD

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Dr. Bahr is Director, the Paul Dudley White Coronary Care System, St. Agnes Hospital, Baltimore.

In today's world medicine is rapidly changing. How do we keep the best of the old (quality performance) and assimilate the economic pressures facing medicine and hospitals? This intertwining requires innovative and creative approaches. One such approach is the Chest Pain Emergency Room (CPER) where focusing on the number one health problem of the nation, heart attack, can take place at the community level.

"Marketing" of the CPER may bring more patients into hospitals at earlier stages, where frontier medical care can be provided for them. The community would benefit by the salvage of life and myocardium. Hospitals would be rewarded by an increase in their patient flow, thereby utilizing more hospital resources such as non-invasive cardiac testing, cardiac catheterization, balloon angioplasty, and cardiac bypass surgery. The potential bonanza would come from providing the best of medicine to a segment of the population who now experience damage to their myocardium and sudden death as a result of the heart problem. In this way hospital profits would be maximized (increasing survival, quality of life, and revenue) and losses minimized.

A Community Problem

Coronary care is a community problem because a significant number of sudden deaths and myocardial infarctions take place in this environment. Before entering the hospital coronary care system, the public must interact with the emergency care delivery system as well as with the hospital emergency room. The ultimate fate of the community depends on the quality and effort available in these areas.

More is saved at the "front end" than at the "back end." It is better to deal with the problem at the angina stage rather than at the MI stage where congestive heart failure, cardiogenic shock, and reduced physical existence can result from damage to the heart. Destruction of the heart and death are time related to the onset of the problem. As time passes the problem magnifies. With early intervention, damage can be averted by the early identification of the MI patient, and lethal arrhythmias can be prevented by the use of prophylactic Xylocaine. This can be accomplished with rapid admission to the coronary care system: the emergency room setting or, even better, a CPER. Here personnel can be trained in the proper application of Xylocaine and monitoring of the chest-pain patient.

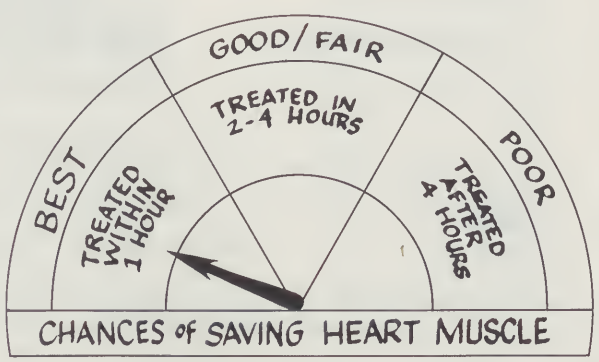
Through early intervention, myocardial infarctions can be averted by the aggressive treatment of the unstable anginal state. Many patients can be stabilized with the use of intravenous nitroglycerin, beta blockers, and calcium blockers. The rewards are great: the treatment prevents myocardial damage and isolates a category of patients with coronary obstruction without infarction. It identifies patients who are in need of cardiac catheterization or a definitive procedure such as cardiac catheterization or bypass surgery.

Even more exciting is the use of streptokinase intervention early in the course of the MI and in the high-risk category of unstable angina pectoris patients. The promising results of a simple, half-hour intravenous infusion of streptokinase may become available to the sophisticated ER where personnel are trained in this first-line effort.

To rush this type of early MI patient into a busy coronary care unit, especially when beds may not be available, is not the total answer. Nor is it expected that the intracoronary use of streptokinase will make a large dent in the overall death rate. For the best results, intervention of this magnitude needs to be done at the very inception of the heart attack. Streptokinase therapy is currently the practice in the Chest Pain Emergency Room at St. Agnes Hospital.

Appropriate "Interface"

Early intervention cannot take place if the patient is not brought to the hospital. As previously mentioned,



this system can work only if all gears are properly oiled and are properly coordinated. A systems analysis of the coronary care problem dictates need of an interface among a trained public, the emergency medical delivery system, and the hospital emergency room. The public should be taught cardiopulmonary resuscitation and the early warning signs of a heart attack. But what is more important is the concept of having an "executive person" in each family to deal with the chest pain patient who is experiencing procrastination and denial of the heart attack. Delaying early entry into the system accounts for the large number of sudden deaths and myocardial infarctions that occur in the community. This message can be carried to the public through the educational system. We are involved in bringing this to fruition at the high school level in Maryland (Resolution by Maryland State Board of Education and Governor's Proclamation).

If intervention is the key, hospitals must maximize their resources at the emergency room level for the best effect. Highlighting the problem for the community will encourage early entry into the hospital to allow the best care that medicine can offer and the best use of our hospital resources.

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The Rise and Fall of the American Physician

If the title sounds similar to the rise and fall of the Roman Empire, it is intentional. The patrician society of Rome sat contentedly by, glutting themselves on the magnificent morsels of the greatest society the world has ever seen. They were satisfied that the Empire would endure forever although the perimeters of the Empire were being eroded by the barbarian hordes. They were given disheartening reports by the officers in the field but chose to ignore them for the pleasures of the next orgy thrown by the Emperor or by their friends.

This is exactly where American physicians are today. They are contentedly feasting on the morsels a rich society is throwing their way.

Nowadays, instead of barbarian hordes, we have HMOs and PPOs. Instead of the Emperor, we have the President and his Medicare legislation freeze. Morsels are thrown to us by the insurance companies, and we gladly accept them in hopes of feeling contented as we did in the past.

In our medical society there are 10 percent who always fight the battles, 10 percent who fight some battles, and 80 percent who sit by while the frontline troops give their alarming reports. As with the Roman Empire, American medicine today cannot endure the onslaught unless the 80 percent are mobilized to action. We cannot be satiated by what the government, insurance companies, and HMO/PPOs are throwing to us. They are eroding the best system of medicine the world has known. We must learn from history or suffer the same mistakes again. We cannot sit idly by luxuriating in our past.

We must develop the same mentality our forefathers had in making this country great. If the physicians of this country were the Minutemen during the American Revolution we would now be under rule of the House of Windsor.

My simple message is a plea to the 80 percent of our physicians in the society watching the battle from the sidelines: join the fray. Take at least 10 percent of the time you devote to your practice and devote it to actively doing something to reverse this country's trend toward reducing the quality of health care.

Write a letter to the President. Write a letter to your congressman or to your legislators. Make your patients aware of what is happening specifically regarding business control of medical decisions and how it hurts the system; of how HMO/PPOs do not save the patient money in the long run; of how buying cheaper policies will result in lower quality health care. Fight every bit of negative legislation tooth and nail. Encourage legislators to enact positive legislation that would support ease of the malpractice burden.

In short, do something! Don't let the empire of the American physician and the practice of quality medicine fall.

RONALD C. KRETKOWSKI **MD**
1986 President
Prince George's Medical Society

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***See Warnings and Precautions.**

Please see brief summary of prescribing information on the next page.



CARDIZEM® FEW SIDE EFFECTS IN ANTIANGINAL THERAPY

diltiazem HCl/Marion

60 mg tid or qid

Brief Summary
Professional Use Information

CARDIZEM®
(diltiazem HCl) 30 mg and 60 mg Tablets

CONTRAINDICATIONS
CARDIZEM is contraindicated in (1) patients with sick sinus syndrome except in the presence of a functioning ventricular pacemaker, (2) patients with second- or third-degree AV block except in the presence of a functioning ventricular pacemaker, and (3) patients with hypotension (less than 90 mm Hg systolic).

WARNINGS

1. ***Cardiac Conduction.*** *CARDIZEM prolongs AV node refractory periods without significantly prolonging sinus node recovery time, except in patients with sick sinus syndrome. This effect may rarely result in abnormally slow heart rates (particularly in patients with sick sinus syndrome) or second- or third-degree AV block (six of 1,243 patients for 0.48%). Concomitant use of diltiazem with beta-blockers or digitalis may result in additive effects on cardiac conduction. A patient with Prinzmetal's angina developed periods of asystole (2 to 5 seconds) after a single dose of 60 mg of diltiazem.*
2. ***Congestive Heart Failure.*** *Although diltiazem has a negative inotropic effect in isolated animal tissue preparations, hemodynamic studies in humans with normal ventricular function have not shown a reduction in cardiac index nor consistent negative effects on contractility (dp/dt).*
   Experience with the use of CARDIZEM alone or in combination with beta-blockers in patients with impaired ventricular function is very limited. Caution should be exercised when using the drug in such patients.
3. ***Hypotension.*** *Decreases in blood pressure associated with CARDIZEM therapy may occasionally result in symptomatic hypotension.*
4. ***Acute Hepatic Injury.*** *In rare instances, significant elevations in enzymes such as alkaline phosphatase, CPK, LDH, SGOT, SGPT, and other symptoms consistent with acute hepatic injury have been noted. These reactions have been reversible upon discontinuation of drug therapy. The relationship to CARDIZEM is uncertain in most cases, but probable in some. (See PRECAUTIONS.)*

PRECAUTIONS
General. *CARDIZEM (diltiazem hydrochloride) is extensively metabolized by the liver and excreted by the kidneys and in bile. As with any new drug given over prolonged periods, laboratory parameters should be monitored at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic function. In subacute and chronic dog and rat studies designed to produce toxicity, high doses of diltiazem were associated with hepatic damage. In special subacute hepatic studies, oral doses of 125 mg/kg and higher in rats were associated with histological changes in the liver which were reversible when the drug was discontinued. In dogs, doses of 20 mg/kg were also associated with hepatic changes; however, these changes were reversible with continued dosing.*

Drug Interaction. *Pharmacologic studies indicate that there may be additive effects in prolonging AV conduction when using beta-blockers or digitalis concomitantly with CARDIZEM. (See WARNINGS.)*

Controlled and uncontrolled domestic studies suggest that concomitant use of CARDIZEM and beta-blockers or digitalis is usually well tolerated. Available data are not sufficient, however, to predict the effects of concomitant treatment, particularly in patients with left ventricular dysfunction or cardiac conduction abnormalities. In healthy volunteers, diltiazem has been shown to increase serum digoxin levels up to 20%.

Carcinogenesis, Mutagenesis, Impairment of Fertility. *A 24-month study in rats and a 21-month study in mice showed no evidence of carcinogenicity. There was also no mutagenic response in in vitro bacterial tests. No intrinsic effect on fertility was observed in rats.*

Pregnancy. *Category C. Reproduction studies have been conducted in mice, rats, and rabbits. Administration of doses ranging from five to ten times greater (on a mg/kg basis) than the daily recommended therapeutic dose has resulted in embryo and fetal lethality. These doses, in some studies, have been reported to cause skeletal abnormalities. In the perinatal/postnatal studies, there was some reduction in early individual pup weights and survival rates. There was an increased incidence of stillbirths at doses of 20 times the human dose or greater.*

There are no well-controlled studies in pregnant women; therefore, use CARDIZEM in pregnant women only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. *Diltiazem is excreted in human milk. One report suggests that concentrations in breast milk may approximate serum levels. If use of CARDIZEM is deemed essential, an alternative method of infant feeding should be instituted.*

Pediatric Use. *Safety and effectiveness in children have not been established.*

ADVERSE REACTIONS
Serious adverse reactions have been rare in studies carried out to date, but it should be recognized that patients with impaired ventricular function and cardiac conduction abnormalities have usually been excluded.

In domestic placebo-controlled trials, the incidence of adverse reactions reported during CARDIZEM therapy was not greater than that reported during placebo therapy.

The following represent occurrences observed in clinical studies which can be at least reasonably associated with the pharmacology of calcium influx inhibition. In many cases, the relationship to CARDIZEM has not been established. The most common occurrences as well as their frequency of presentation are: edema (2.4%), headache (2.1%), nausea (1.9%), dizziness (1.5%), rash (1.3%), asthenia (1.2%). In addition, the following events were reported infrequently (less than 1%):

Cardiovascular:	*Angina, arrhythmia, AV block (first degree), AV block (second or third degree — see conduction warning), bradycardia, congestive heart failure, flushing, hypotension, palpitations, syncope.*
Nervous System:	*Amnesia, gait abnormality, hallucinations, insomnia, nervousness, paresthesia, personality change, somnolence, tinnitus, tremor.*
Gastrointestinal:	*Anorexia, constipation, diarrhea, dysgeusia, dyspepsia, mild elevations of alkaline phosphatase, SGOT, SGPT, and LDH (see hepatic warnings), vomiting, weight increase.*
Dermatologic:	*Petechiae, pruritus, photosensitivity, urticaria.*
Other:	*Amblyopia, dyspnea, epistaxis, eye irritation, hyperglycemia, nasal congestion, nocturia, osteoarticular pain, polyuria, sexual difficulties.*

The following postmarketing events have been reported infrequently in patients receiving CARDIZEM: alopecia, gingival hyperplasia, erythema multiforme, and leukopenia. However, a definitive cause and effect between these events and CARDIZEM therapy is yet to be established. ***Issued 7/86***

See complete Professional Use Information before prescribing.

References: 1. *Pepine CJ, Feldman RL, Hill JA, et al: Clinical outcome after treatment of rest angina with calcium blockers: Comparative experience during the initial year of therapy with diltiazem, nifedipine, and verapamil. Am Heart J 1983, 106(6):1341-1347.* ***2.*** *Shapiro W: Calcium channel blockers: Actions on the heart and uses in ischemic heart disease. Consultant 1984;24(Dec):150-159.* ***3.*** *Johnston DL, Lesoway R, Humen DP, et al: Clinical and hemodynamic evaluation of propranolol in combination with verapamil, nifedipine and diltiazem in exertional angina pectoris: A placebo-controlled, double-blind, randomized, crossover study. Am J Cardiol 1985;55:680-687.* ***4.*** *Cahn PF, Brounwald E: Chronic ischemic heart disease, in Brounwald E (ed): Heart Disease: A Textbook of Cardiovascular Medicine, ed 2. Philadelphia, WB Saunders Co, 1984, chap 39.* ***5.*** *Schroeder JS: Calcium and beta blockers in ischemic heart disease: When to use which. Mod Med 1982;50(Sept):94-116.*

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Keflet is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-sensitive patients.

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Brief Summary. Consult the package literature for prescribing information.
Indications and Usage: Keflet™ Tablets (cephalexin, Dista) are indicated for the treatment of the following infections when caused by susceptible strains of the designated microorganisms:

Respiratory tract infections caused by *Streptococcus pneumoniae* and group A β-hemolytic streptococci (Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. Keflet is generally effective in the eradication of streptococci from the nasopharynx, however, substantial data establishing the efficacy of Keflet in the subsequent prevention of rheumatic fever are not available at present.)

Otitis media due to *S pneumoniae, Haemophilus influenzae,* staphylococci, streptococci, and *Neisseria catarrhalis*

Skin and skin-structure infections caused by staphylococci and/or streptococci

Bone infections caused by staphylococci and/or *Proteus mirabilis*

Genitourinary tract infections, including acute prostatitis, caused by *Escherichia coli, P mirabilis,* and *Klebsiella* sp.

Note—Culture and susceptibility tests should be initiated prior to and during therapy. Renal function studies should be performed when indicated.

Contraindication: Keflet is contraindicated in patients with known allergy to the cephalosporin group of antibiotics.

Warnings: BEFORE CEPHALEXIN THERAPY IS INSTITUTED, CAREFUL INQUIRY SHOULD BE MADE CONCERNING PREVIOUS HYPERSENSITIVITY REACTIONS TO CEPHALOSPORINS AND PENICILLIN. CEPHALOSPORIN C DERIVATIVES SHOULD BE GIVEN CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS.

SERIOUS ACUTE HYPERSENSITIVITY REACTIONS MAY REQUIRE EPINEPHRINE AND OTHER EMERGENCY MEASURES.

There is some clinical and laboratory evidence of partial cross-allergenicity of the penicillins and the cephalosporins. Patients have been reported to have had severe reactions (including anaphylaxis) to both drugs.

Any patient who has demonstrated some form of allergy, particularly to drugs, should receive antibiotics cautiously. No exception should be made with regard to Keflet.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics (including macrolides, semisynthetic penicillins, and cephalosporins); therefore, it is important to consider its diagnosis in patients who develop diarrhea in association with the use of antibiotics. Such colitis may range in severity from mild to life-threatening.

Treatment with broad-spectrum antibiotics alters the normal flora of the colon and may permit overgrowth of clostridia. Studies indicate that a toxin produced by *Clostridium difficile* is one primary cause of antibiotic-associated colitis.

Mild cases of pseudomembranous colitis usually respond to drug discontinuance alone. In moderate to severe cases, management should include sigmoidoscopy, appropriate bacteriologic studies, and fluid, electrolyte, and protein supplementation. When the colitis does not improve after the drug has been discontinued, or when it is severe, oral vancomycin is the drug of choice for antibiotic-associated pseudomembranous colitis produced by *C difficile.* Other causes of colitis should be ruled out.

Usage in Pregnancy—Safety of this product for use during pregnancy has not been established.

Precautions: *General*—Patients should be followed carefully so that any side effects or unusual manifestations of drug idiosyncrasy may be detected. If an allergic reaction to Keflet occurs, the drug should be discontinued and the patient treated with the usual agents (eg, epinephrine or other pressor amines, antihistamines, or corticosteroids).

Prolonged use of Keflet may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Positive direct Coombs' tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coombs' testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs' test may be due to the drug.

Keflet should be administered with caution in the presence of markedly impaired renal function. Under such conditions, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended.

Indicated surgical procedures should be performed in conjunction with antibiotic therapy.

As a result of administration of Keflet, a false-positive reaction for glucose in the urine may occur. This has been observed with Benedict's and Fehling's solutions and also with Clinitest® tablets but not with Tes-Tape® (Glucose Enzymatic Test Strip, USP, Lilly).

Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.

Usage in Pregnancy—Pregnancy Category B—The daily oral administration of cephalexin to rats in doses of 250 or 500 mg/kg prior to and during pregnancy, or to rats and mice during the period of organogenesis only, had no adverse effect on fertility, fetal viability, fetal weight, or litter size. Note that the safety of cephalexin during pregnancy in humans has not been established.

Cephalexin showed no enhanced toxicity in weanling and newborn rats as compared with adult animals. Nevertheless, because the studies in humans cannot rule out the possibility of harm, Keflet should be used during pregnancy only if clearly needed.

Nursing Mothers— The excretion of cephalexin in the milk increased up to 4 hours after a 500-mg dose; the drug reached a maximum level of 4 μg/mL, then decreased gradually, and had disappeared 8 hours after administration. Caution should be exercised when Keflet is administered to a nursing woman.

Adverse Reactions: *Gastrointestinal*—Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment. Nausea and vomiting have been reported rarely. The most frequent side effect has been diarrhea. It was very rarely severe enough to warrant cessation of therapy. Dyspepsia and abdominal pain have also occurred. As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.

Hypersensitivity— Allergic reactions in the form of rash, urticaria, angioedema, and, rarely, erythema multiforme, Stevens-Johnson Syndrome, or toxic epidermal necrolysis have been observed. These reactions usually subsided upon discontinuation of the drug. Anaphylaxis has also been reported.

Other reactions have included genital and anal pruritus, genital moniliasis, vaginitis and vaginal discharge, dizziness, fatigue, and headache. Eosinophilia, neutropenia, thrombocytopenia, and slight elevations in SGOT and SGPT have been reported.

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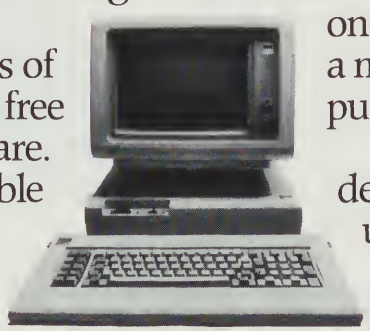
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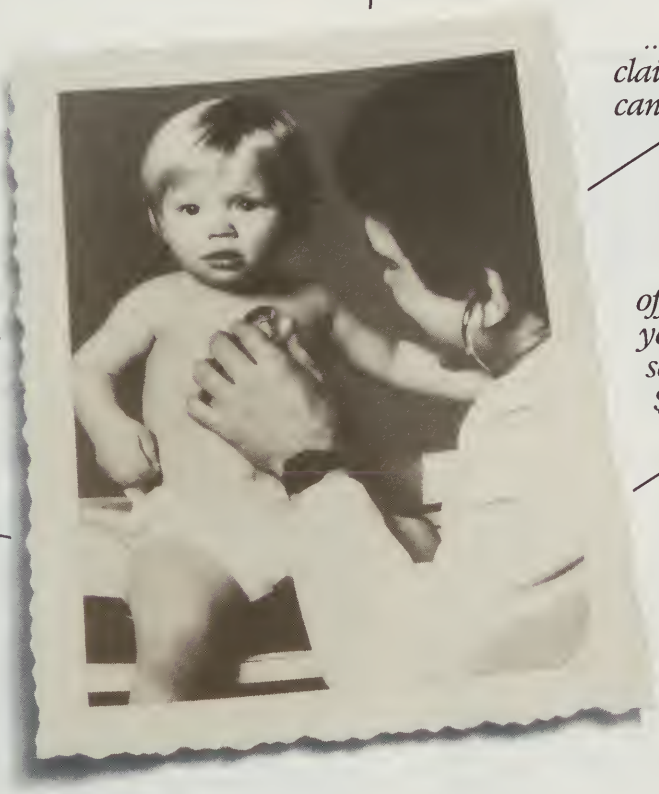
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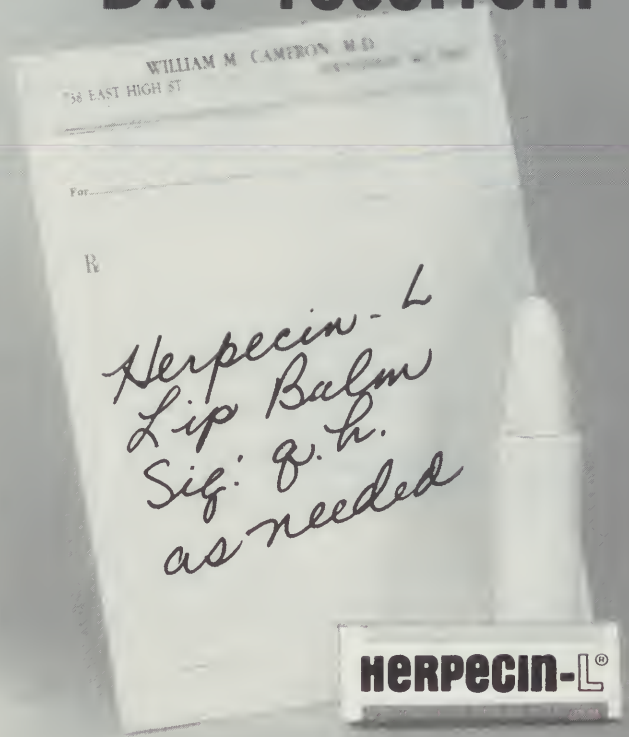
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Alexander Borodin: Medical Educator, Chemist, Composer

SUSAN E. HARMAN

Alexander Borodin, Russian chemist and composer, juggled two careers for nearly 30 years. When the field of organic chemistry was in its infancy, Borodin provided valuable analytical data on the aldehydes and developed a method for measuring the nitrogen content of urea. As a professor at the St. Petersburg Academy of Medicine, he trained an entire generation of chemists and physicians. He was one of the founders of the Women's Medical College of St. Petersburg at a time when medical education for women was still controversial. As a composer, Borodin was one of the first Russian nationalists to develop an international reputation. His works are noted for their melodic, harmonic, and rhythmic orginality; brilliant orchestral coloring; and oriental and Russian folk characteristics.

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One hundred years ago, the Russian scientific world lost one of its most respected members. The March 19, 1887 *Lancet* reported:

> On Feb. 28th, Dr. Alexander Porphyryevich Borodin, Professor of Organic Chemistry in the Military Medical Academy of St. Petersburg, died quite suddenly . . . His published works are tolerably numerous, and include . . . a number of important articles on the estimation of nitrogen. By means of Professor Borodin's process combined with that of Kjeldahl, the clinical physician has now a means whereby this estimation may be made with a very moderate amount of difficulty and trouble. In spite of his arduous professiorial and laboratory work, Professor Borodin found time for the cultivation of the art and science of music, in which he was quite adept. He is, indeed, said to have rendered valuable service to the cause of music in Russia.[1]

As the last two sentences indicate, the Russian music world was not yet fully aware that it, too, had lost a brilliant member.

For nearly 30 years, Alexander Borodin juggled his two careers as chemist and composer. In fact, he considered himself to be primarily a medical educator.

> Music, for my friends, is the principal occupation of their lives, the end for which they live. For me, it is a relaxation, a pasttime that distracts me from the absorbing duties that tie me to a professorial chair . . . I love my profession and my science. I love the Academy of Medicine and my pupils.[2]

Alexander Porfiryevich Borodin was born November 12, 1833 in St. Petersburg, the illegitimate son of Prince Luka Stepanovich Gedianov and Avdotya Konstantinovna. Borodin received a thorough classical education.[3] He studied flute, piano, and cello,[4] and by the time he was a teenager he had composed several pieces of chamber music.[5] Borodin also showed a strong interest in chemistry, building and equipping his own laboratory.

In the fall of 1850 Borodin entered St. Petersburg's Military Academy of Medicine,[3] which has been called "the greatest of all Russian medical institutions."[6] He soon gravitated to the chemistry department headed by Nikolai Zinin, one of the most brilliant chemists of the nineteenth century. It is small wonder that the young medical student idolized Zinin. At first Zinin was skeptical of Borodin, but soon discovered his natural talent for chemistry.[7]

Borodin's musical activities were not neglected, since a number of his friends at the Academy were musically inclined. He spent many evenings playing chamber music and composed sporadically. Needless to say, Zinin was not pleased. He is reported to have said "I have placed all my hopes in you, and want you to be my successor one day. You waste too much time thinking about music. A man cannot serve two masters."[3]

Borodin completed his studies in 1856 and received his degree in 1858, after defending his dissertation "On the Like Action of Arsenic and Phosphoric Acids on the Human Organism," which also became his first published paper. From 1856 to 1859 he served as a house physician at the Second Military Hospital in St. Petersburg. Experiences such as operating on the servant of a high-ranking official and treating serfs who had been mercilessly flogged convinced Borodin he was not cut out for medical practice. One positive event from this period was his meeting with another fledgling composer, Modest Moussorgsky.

Study in Western Europe

From 1859 to 1862 Borodin studied in western Europe on an Academy stipend arranged by Zinin.[7] He spent most of his time in the Heidelberg laboratory of Emil Ehrlenmeyer, researching organic halogens, especially flourides.[4] He attended lectures by Robert Bunsen, Herman Helmholtz, and Gustav Kirchoff, more to observe their lecture techniques than to gain new knowledge. Borodin also studied several months in Paris. He heard Claude Bernard, Henri Regnault, Henri Sainte-Claire Deville, Jean Baptiste Dumas, and Louis Pasteur lecture and met Charles Wurtz and Louis Jacques Thenard.[3]

During this period, Borodin published several articles in European chemical journals.[4] He spent much of his postgraduate study years working and traveling with another Russian student destined to become a famous chemist, Dimitri Mendeleev.

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Alexander Borodin. Portrait painted in 1888 by Ilya Repin is housed at the State Russian Museum in Leningrad.

In September of 1860 Borodin, Zinin, and Mendeleev were part of the Russian delegation at the Karlsruhe chemical congress. The congress had been called by Freidrich Kekulé in an attempt to resolve the confusion surrounding atomic weights, chemical notation, and the differences between atoms and molecules. At the end of the conference, the Italian chemist Stanislao Cannizzaro passed out a pamphlet in which he clearly set forth a way to determine atomic weights. Such a prestigious gathering must have made a tremendous impression on Borodin.[7]

During his time abroad, Borodin did not neglect his musical hobby. He continued to play in informal chamber music groups and attend as many concerts as possible.[3] He met his future wife, Catherine Protopopova, a Russian pianist, who introduced him to the works of Chopin and Schumann, took him to the Wagner festival in Mannheim, and encouraged his own musical talent.[5] Borodin composed a number of songs and chamber music pieces. Most of these works show the influence of the German masters: Beethoven, his early idol, and especially Mendelssohn. However, some of the hallmarks of Borodin's later style already could be seen.[3]

Reforms in Russia

Borodin's return to St. Petersburg in 1862 coincided with a period of political, educational, and social reform in Russia. The reign of Tsar Alexander II, from 1855 to 1881, saw the emancipation of the serfs, introduction of local self-government, and reorganization of the judicial system and military service. Press restrictions and other forms of censorship were relaxed. The universities gained more self-control, instituted liberal admissions policies, and allowed a large number of unofficial student organizations.[8]

Students and others of the intelligentsia with the opportunity to travel abroad absorbed German philosophy, French socialism, and English political views.[6] The revolutionary and nationalistic sentiments sweeping Europe in the mid-nineteenth century found sympathy among educated Russians.[8] Though Borodin was never a real political activist, he and his fiancee were certainly sympathetic to progressive, democratic ideals.[3]

During this same period, largely due to university reform, Russian chemistry entered a golden age of achievement.[9] In the mid-1800s, the entire field of chemistry was undergoing a revolution; many firmly entrenched theories were discarded or replaced.[10] Analytical and organic chemistry were in their infancy as disciplines. Things were in such a confused state that chemists could not even agree on the molecular formula of water.[7]

Slowly, painfully, and not without controversy, a number of talented chemists in France and Germany began to sort through the difficulties. In 1858 Friedrich Kekulé and Archibald Couper advanced the first satisfactory theories of molecular constitution. After the Karlsruhe Congress the gradual acceptance of Canizzano's suggestions laid the foundation for analytical chemistry.[11] In 1861 Borodin attended another conference at which his fellow-countryman A. M. Butlerov read his landmark paper "Aspects of the Structure of Chemical Combinations."[3]

Once the atomic weight and molecular structure issues were solved, the way was clear for a classification of the elements. Beginning in 1869, Borodin's friend Mendeleev formulated his periodic law of the elements, set up a classification scheme, and predicted elements not yet discovered. With analytical chemistry on a firm footing, organic chemists moved on to synthesizing carbon compounds, both known and unknown.[11]

Particularly with the work of Zinin, Butlerov, and Mendeleev, Russian chemistry rose to the high standards of western Europe. All three spent at least part of their careers in St. Petersburg. Laboratory experimentation and publication increased. The 1860s saw the founding, by Borodin and others, of the Russian Chemical Society, one of the first associations founded by

scholars themselves, rather than being imposed by the state.[9]

Russian Composers

Russian music was also poised for a rebirth. The ruthless westernization of the eighteenth century had emphasized Italian opera and all but eliminated use of indigenous folk music in serious composition. The first Russian composer to incorporate such elements was Michael Glinka. While he pointed the way with his use of folk songs and characteristically Russian harmonizations, it remained for the next generation to develop a truly national school.[12]

These composers wanted to produce music that was free from the traditional classical rules of western Europe, music that would exemplify the true spirit of the Russian people.[5] Their compositions often made use of folk songs and liturgical chants,[13] as well as oriental qualities.[14] The music establishment, represented by the Russian Musical Society and the conservatories, insisted on adherence to more western standards and were in direct opposition to the "new Russian school." Actually the nationalists did assimilate some of the international style of France, Italy, and especially Germany, as needed.[8]

Borodin's return to Russia occurred at a crucial time for education, chemistry, and music. In December 1862 he was appointed adjunct professor of chemistry[3] at the academy and in 1864 he was appointed full professor. While his specialty was organic chemistry, Borodin also taught courses in inorganic chemistry, the history of chemical theory, and chemical applications to medical physiology and pathology.[15] He was a conscientious, considerate teacher who soon won the respect of his students.[7]

In 1863 Borodin married Catherine, and shortly afterward they moved into a rather makeshift apartment in the laboratory building. The rooms were spread out, separated by a corridor leading to laboratories and offices, so real privacy was impossible. Insect infestations, botched repair work, clumsy renovations, and other problems occurred with frustrating regularity.[3] Somehow he managed to do research and compose music. For Borodin, "his home, his laboratory, and his music room [were] all inextricably mixed in one unit."[4]

The physical facilities were not the only thing contributing to Borodin's disorganized "life-style." Catherine suffered from tuberculosis and asthma, so housekeeping, regular meals, and a normal schedule were sadly lacking. Her health forced her to spend a great deal of time in Moscow with her family where the climate was more agreeable. Borodin was left to shift for himself in St. Petersburg and had to waste valuable time on train trips to visit her and in detailed correspondence.[4] His fatherly good humor encouraged relatives, friends, and students to take advantage of his hospitality and generosity.[16] Though the Borodins had no children of their own, they adopted several.[13]

Contrary to what might be expected, Borodin seemed to thrive in this chaos. In 1862 he published a paper detailing his experiments on organic fluorides. Next he studied the reaction of zinc ethyl on chloriodoform[10] and became the first chemist to prepare benzoyl chloride. Borodin also began to research the aldehydes, a subject that occupied most of his scientific career.[4]

The year 1862 was important for Borodin's musical development as well. In the fall of that year, through Modest Moussorgsky, he met Mili Balakirev. This charismatic amateur musician already had gathered around him three other budding composers who, along with Borodin, came to be known as the Mighty Five. Coincidentally, all these men had strongly scientific backgrounds. Balakirev was a former mathematician, Cesar Cui an army professor of fortifications, Moussorgsky a former military officer, and Nikolai Rimsky-Korsakov a naval cadet.[13] They shared an admiration for Glinka and advocated strong Russian nationalism in music.[4]

Borodin's Compositions

Borodin found the Five's musical philosophy so similar to his own and was so impressed with Balakirev that he immediately began his Symphony No. 1 in E-flat Major.[4] But, as was typical of Borodin, this symphony took nearly five years to complete.[17] Composition had to be sandwiched in between lecturing, research, professional meetings, and committee work. During this period, Borodin was engaged in research concerning the reaction of sodium and valeraldehyde, which led him into studies of the capric and isocapric acids.[10]

Many of his musical colleagues urged him to give up at least some of his professional duties, while other friends believed he did his best work while he was busiest.[13] Borodin followed both vocations, happily insisting he loved chemistry and music equally.[10] Rimsky-Korsakov described the frustration of a typical visit with his friend:

> Having finished his [scientific] work, he would go with me to his apartment, where we began musical operations or conversations, in the midst of which he used to jump up, run back to the laboratory to see whether something had not burned out or boiled over; meanwhile he filled the corridor with incredible sequences from successions of ninths or sevenths. Then he would come back, and we proceeded with the music.[16]

In fact, some musicologists have suggested that the startling innovation in form in the first movement of Borodin's First Symphony can be traced to his interest in analytical chemistry. After all, it had only been a few years since he had traveled to Karlsruhe, heard Butlerov discuss the structure of chemical combinations, and read Kekulé's theories on molecular structure.[4]

Traditionally, most symphony first movements are in sonata form, consisting of two themes, each presented in turn, a section developing this material through fragmentation and variation, and then a restatement of the original themes.[14] Borodin begins with a mournful melody in Russian folk style[3] and almost immediately begins developing it. There is some hint of a second theme, but it remains fragmentary. After a

short development and restatement, there appears to be more development.

Then a slow epilogue suddenly makes this unconventional sonata form clear. The two themes are really one and the same. While the western European concept of sonata form stressed contrasting ideas, Borodin emphasized unity. As Gerald Abraham explains it,

> It is the general outline of sonata form, but nothing more. The real, as opposed to this apparent, shape of the movement, emerges entirely from the material itself as it works to the foreseen goals . . . . Borodin's musical organisms grow and live, and shape themselves in growing, not unlike novels.[17]

Rather than presenting a theme and then tearing it apart, Borodin gives a number of pieces and then puts them together. William Ober calls this "an inductive synthesis."[4] Jean Sibelius and other twentieth century composers have copied this innovation.[4]

The rest of the symphony is much more conventional, showing the influence of Beethoven, Berlioz, and Schumann. But Borodin gives his own stamp to the rhythmic, syncopated themes, often basing them on the interval of the fourth, rather than the third or fifth. He also uses unusual key relationships and polyharmony.[12] The symphony's premiere performance in January 1869 was a moderate success, and Borodin was sufficiently encouraged to continue composing.[3]

After the success of his first symphony and several songs, Borodin began work on a second symphony. He was also interested, like the rest of the Five, in composing an opera that would stress nationalism and realism.[3] In 1869 Vladimir Stassov, one of the Five's staunchest supporters, suggested "the Russian equivalent of Beowulf, 'The Lay of Prince Igor's Army',"[18] as an appropriate subject. The original intention was to compose a national opera in the manner of Glinka, focusing on this 1185 conflict between the Russians, led by Prince Igor, and the Polovetsi, Eastern nomads.[14]

For about a year Borodin worked enthusiastically on Stassov's scenerio, but then laid it aside in despair. In 1874 he came back to the project and worked on it sporadically until his death, leaving it unfinished.[3] Borodin wrote his own libretto as he went along, reading historical accounts and collecting folk songs as he did so. He composed rather haphazardly, incorporating parts that interested him at the time.[18] When friends pressured him about the opera, he joked "Igor is my natural child: I take care to keep him well hidden!"[10]

Scientific Work

Considering all the research and administrative duties Borodin was involved in during the 1870s, it is no surprise his compositions were caught in the bottleneck of his scientific work.[3] After publishing several articles on valeraldehyde, he turned to the action of hydrochloric acid[10] on acetaldehyde. The result was a new compound, aldol, discovered simultaneously with Charles Wurtz in 1872. This same type of reaction was later used to form many other compounds.[7] Borodin next studied the aromatic aldehydes.[10]

In the fall of 1871, Borodin quietly embarked on another humanitarian crusade. He allowed two young women to work in his laboratory,[3] making it the first chemical laboratory in Russia open to women.[15] Until the reforms of Alexander II, any higher education for women had been virtually nonexistent. As more and better educated women finished secondary school, "higher courses for women" of various types sprang up at the universities. In this regard, Russia was ahead of western Europe.[8]

Borodin's faith in his women students was not misplaced. In the fall of 1872, with a "Course in Obstetrics," the first medical courses for women began.[3] At that time, it was difficult for a women to receive medical training anywhere in Europe; it was impossible in Russia. This initial course eventually grew into the Women's Medical College of St. Petersburg.[4] From the beginning Borodin taught chemistry and performed many administrative functions free of charge.

These new responsibilities came at a time when Borodin's duties at the Academy were increasing. After a period of declining health, Zinin retired and Borodin became head of the chemistry department. He continued to represent the Academy at numerous meetings. As always, he was deeply involved in charity concerts to raise money for poor students.[3]

A Second Symphony

During this exceptionally busy period, Borodin wrote "When I am so ill I must sit at home and can do nothing important, my head splitting, my eyes filled with tears so that every moment I must take out my handerchief, then I compose music."[5] Summer vacations provided the only extended periods Borodin had to devote to composition. Still, he managed to finish his Symphony No. 2 in B Minor in 1876.[3]

Since Borodin was also working on *Prince Igor*, musical ideas from the opera found their way into the symphony.[17] In fact, when asked about *Prince Igor*, he often said "You've heard some of the best of it in my new symphony."[4] It is not surprising the symphony has a heroic, vivid style.[4]

The first theme is a "magnificently barbaric gesture,"[14] at which Borodin hammers away in a number of keys and tempos. This typically Russian "rhythmic trampling" foreshadows Igor Stravinsky's *Rites of Spring*.[14] Richard Leonard declares that "a new voice speaks out in the art of music. This is unmistakably a Russian symphony, dyed with the hues of new nationalism."[19] The whole composition evokes Russian folk elements, but the melodies are Borodin's own. He makes use of the pentatonic scale, characteristically Russian chord progressions, oriental effects, and sudden key changes.[12]

The February 1877 premiere met with only a lukewarm reception.[3] However, Felix Weingartner has called this symphony "the finest piece of modern music that Russia has ever produced."[2] It is now considered

one of Borodin's masterpieces.[5]

In the late 1870s Borodin wrote his String Quartet No. 1 in A Major.[20] He also worked at *Prince Igor* in fits and starts and portions of it were performed during his lifetime. On several occasions, Rimsky-Korsakov scheduled concerts before the named pieces were even completed in order to spur his friend along. Rimsky-Korsakov described one instance where this strategy nearly backfired.

> I gave up hope of the parts ever being ready, and offered to give him a hand with the orchestration . . . To save time we wrote in pencil and not in ink . . . When we had finished Borodin coated the pages of the score with liquid gelatine to prevent the pencil from rubbing out; and to get the pages dried out as quickly as possible, we hung them about my room on lines like washing.[3]

For once, the chemistry Rimsky-Korsakov so resented had come to his rescue.

In the summer of 1877 Borodin traveled to Germany on Academy business. He also took the opportunity to visit Franz Liszt in Weimar. Liszt was the grand patriarch of European music and had let it be known he looked favorably upon the efforts of the new Russian school. After studying the Second Symphony, Lizst declared

> Go on working, even if your works are not performed or published, even if they get bad reviews. Believe me, they will make their own way through their own merit; you are immensely gifted and most original.[4]

Political Upheaval

During the last years of his life, Borodin's research and composition activities decreased.[3] Tsar Alexander II was assassinated in 1881, and the ascent of Alexander III brought violent reactionary measures. The central government increased its control over the universities and some liberal professors such as Mendeleev lost their jobs. Student unrest shook many campuses,[9] and mass arrests occurred frequently. Though Borodin escaped serious personal difficulties, he was terribly worried about his students. More than once, he spent entire days going from one government office to another, trying to find out who had been arrested, what the charges were, and what might be done to help. He even went so far as to destroy incriminating evidence.

One of the new regime's prime targets was the Women's Medical College. Borodin spent a great deal of time and effort trying to drum up support in official circles, but to no avail. In 1885 the medical courses for women were abolished. When the laboratory equipment was finally moved back to the Academy, Borodin was so upset he burst into tears.

Borodin's responsibilities at the Academy itself did not get any lighter. He was active in exposing embezzlement by a hospital official, a committee on provision of disinfectants to the military, what Dianin called "the notorious 'Commission for investigating the cost of drugs,'" and much other bureaucratic business. Borodin also managed to get elected director of the Russian Musical Society. He founded and conducted a student orchestra.

Added to this were a large number of family problems. Catherine was by now almost a total invalid, and several other relatives suffered medical and financial reverses. A weary Borodin wrote to his wife, once again in Moscow,

> God knows, I am expected to be . . . scientist and committeeman, artist, official, benefactor, father of adopted children, doctor and invalid, all rolled into one . . . But it won't be long before I am nothing more than the last of these.[3]

Such pessimistic moods did not last long, however. Borodin published a handbook explaining methods of urinalysis and developed an azotometer to measure the nitrogen content of urea.[4] This technique, using sodium hypobromide, was included in biochemistry textbooks for a number of years.[5] Most of his chemical work at this time was in fact supervision of student research.

In 1880 Borodin was asked to write incidental music for a festival concert celebrating Tsar Alexander II's silver jubilee. Apparently because of the deadline involved, *In the Steppes of Central Asia* was completed quickly. However, the festival never came off, so the first performance occurred at a private concert in April 1880.[3] This symphonic sketch, dedicated to Liszt, is the only occasion where Borodin used a definite, literal program, that of depicting an Asian caravan being escorted across the desert by Russian soldiers.[14] *In the Steppes of Central Asia* was an immediate success and has sustained its popularity in Russia and abroad.[3]

The String Quartet No. 2 in D Major was completed in 1881.[3] The third movement nocturne is one of Borodin's most famous chamber pieces[14] and was later used, along with other Borodin melodies, in the musical comedy *Kismet*.[4] Gerald Abraham feels this quartet "deserves to rank among the finest quartets of the post-Beethoven period of the last century."[14]

From 1882 onward Borodin worked periodically on his Symphony No. 3 in A Minor, several songs and piano works, and, inevitably, *Prince Igor*. Though he was still having difficulty getting his music performed and accepted in Russia, he was popular in Europe, especially Belgium. Borodin made two trips to Belgium in 1885 and 1886 in connection with performances of his music at the Antwerp Exhibitions.[3]

Illness

In 1885 Borodin contracted cholera and for some time was unable to concentrate sufficiently for research or composition.[4] In the fall of 1886 doctors diagnosed heart disease, brought on by the cholera attack and years of overwork. However, work on his Third Symphony and fresh ideas for *Prince Igor* kept his spirits high. While attending a ball at the Academy on February 28, 1887, Borodin collapsed suddenly and died of a ruptured aneurysm.

Borodin's friends Rimsky-Korsakov, composer Alexander Glazunov, and chemist Alexander Dianin immediately set about putting his affairs in order. Most important were the unfinished manuscripts for the Symphony No. 3 in A Minor and *Prince Igor* scattered about Borodin's cluttered apartment. Glazunov was able to reconstruct the first two movements of the symphony from Borodin's sketches and his own recollections of the composer playing portions at the piano.[3]

The task of completing, orchestrating, and editing *Prince Igor* proved much more formidable. Perhaps because of the long, confusing plot[14] or because of Borodin's compositional technique, the opera lacks continuity, appearing more like a series of numbers or brilliant scenes. Even an abridged version often runs three and a half hours. It is no wonder "the work overwhelmed the composer."[18] Despite its faults, *Prince Igor* is still a masterpiece. The Polovetsian Dances and the prelude to the third act in particular are some of Borodin's finest work.[14]

Borodin was buried in St. Petersburg's Alexander Nevsky cemetary, near the graves of Moussorgsky, Glinka, Balakirev, and Tchaikovsky.[4] On his casket was a silver plate, given by the women physicians he had trained, with the inscription "To the founder, protector and defender of the School of Medicine for Women."[10] In 1889 a large monument was placed at the gravesite by his friends and colleagues. Appropriately enough, it is inscribed with the structures of chemicals he had studied and themes from his compositions.[13]

Borodin made valuable contributions to both his chosen fields, chemistry and music. While he did not make any outstanding chemical discoveries, he was nevertheless a distinguished chemist. As George Sarton puts it, "His best work has been integrated anonymously in the growing chemical knowledge of the last century. That is the sure reward of the honest scientist; whatever is done by him, if done sufficiently well, becomes part and parcel of science."[7] Borodin published about 42 articles, some 24[15] in well-known Russian, German, Italian, and French journals, covering a wide range of fields.[4]

As a professor, Borodin touched many students, leading some toward careers in chemistry and medicine. Pupils such as Alexander Dianin, Alexey Dobroslavin, and Anna Lukanina[3] did a creditable job of keeping Russian research and publication alive even during the reactionary period at the end of the nineteenth century.[9] Borodin's belief in medical education for women was eventually vindicated. After the 1917 Revolution, women were again admitted to medical schools, and the Soviet Union presently has the highest percentage of women physicians of any major nation.

Borodin's musical fame came primarily after his death. His output was understandably rather meager, and he is remembered mainly for *Prince Igor*, *In the Steppes of Central Asia*, two symphonies and two string quartets.[4] The melodic, harmonic, and rhythmic originality; the brilliant orchestral coloring; the oriental flavor combined with epic Russian style;[19] and the logical construction have made Borodin one of the best known Russian composers. Philip Heseltine calls Borodin rather than Brahms the "master craftsman of the late nineteenth century as far as traditional symphonic form was concerned."[2] He was also the first Russian nationalist to develop an international reputation.[19] Through Borodin, the traditions of Glinka were enriched and passed on to Sergei Rachmaninoff, Aram Khatchaturian, Nicolai Miakovsy, and other Russian composers of the twentieth century.[12]

Throughout Alexander Borodin's career, the threads of education, chemistry, and music were inextricably intertwined. He was at the height of his powers at a crucial time for both organic chemistry and Russian music. As a consummate scientist, Borodin used logic and discipline to produce highly structured music. But he also used his originality and imagination to provide the intuitive leaps so essential to scientific advancement. "The stimulating, imaginative quality in Borodin's chosen scientific field is not, after all, so greatly in contradiction to his musical temperament."[10]

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The *Maryland Medical Journal* is the monthly publication of the Medical and Chirurgical Faculty of the State of Maryland. Its goals are educational and informative: the publishing of scientific articles and other technical information as well as editorials, special articles (evaluations, position papers, reviews of nonscientific subjects), membership news, notices of medical events, legislative and governmental news, meetings, continuing education courses, and programs and policies of the Faculty.

Manuscripts may be sent to Editor *MMJ*, 1211 Cathedral St., Baltimore, MD 21201. Articles are accepted for publication on the condition that they are contributed solely to this journal. Transmittal letters should designate one author as correspondent and include his/her address and telephone number. Manuscripts are reviewed by the editor, editorial board members, and guest reviewers. The final decision is reserved for the Editor.

Specifications

Manuscripts must be original typed copy, double-spaced throughout (including text, case reports, legends, tables, and references) with margins of at least one inch. Number pages consecutively. Please submit two additional copies.

Include in the manuscript the concise title, full name of the author (or authors) with highest degree, academic and professional titles, affiliations, and any institutional or other credits.

An introductory synopsis/abstract of approximately 100–150 words is required.

Tables are to be typed on separate sheets of paper, numbered, and have a brief descriptive title. The Editor reserves the right to edit tables. Be sure that statistics are consistent in both tables and text.

References are limited to those citations noted in the text. References are to be typed double-spaced and numbered consecutively as they appear in text. They will be examined critically at the time of review and must be kept to a minimum. The number of references is generally limited to 20 in major contributions and fewer in shorter articles. Exceptions may be made if appropriate in the opinion of the reviewing editor. Personal communications and unpublished data should not be included. The following are necessary: names of all authors, complete title of article cited (lower case), name of journal abbreviated according to *Index Medicus*, volume number, first and last page numbers, and year of publication. For more extenisve information about preparing medical articles for publication, the editors suggest the International Committee of Medical Journal Editors: Uniform requirements for manuscripts submitted to biomedical journals. The complete document is available in the June 1982 issue of the *Annals of Internal Medicine*.

Illustrations are material that cannot be set in type. Photographic material must be submitted as high-contrast, glossy prints. Drawings and graphs must be done professionally in india ink on high-grade white drawing paper. *Omit illustrations that do not increase understanding of text, and limit them to a reasonable number.* Four or fewer illustrations should be adequate for a manuscript of 4 to 5 typed pages. Legends are to be typed on a separate sheet of paper. Type on a gummed label and affix to the back of each illustration: figure number, title of manuscript, name of senior author, and arrow indicating top. Legends for illustrations should be typed on a separate page with numbers corresponding to those on the photographs and drawings. *Cost of printing color* photographs must be borne by the author.

Recognizable photos of patients are to be masked and should carry with them written permission for publication.

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Editorial Responsibility

Manuscripts are subject to editorial modification and such revisions necessary to bring them into conformity with *Journal style*.

Galley proofs will be mailed to the principal author and, if not returned by the specified date, will be considered approved as typeset.

Statements made or opinions expressed by any contributor in any article or feature published in the *Journal* are the sole responsibility of the author.

Priority Issues for Med-Chi

A January 1987 survey of Med-Chi members indicated that the two paramount and equally ranked issues requiring Med-Chi's immediate attention are problems with the Medicare system (reimbursements, administration, etc.) and the rising costs of malpractice insurance premiums.

• Respondents noted their past and present participation in Medicare:

	Participating	Nonparticipating
1986	45.2%	54.2%
1987	50.0%	47.6%

• When queried about a proposal to collapse malpractice insurance premium categories from 14 to 3 in order to more equally distribute premium costs, respondents overwhelmingly opposed the idea:

No	77.4%
Yes	20.8%

In general, low-risk physicians were opposed while high-risk specialists were in favor, expressing concern that the rest of the "family of medicine" were unconcerned with their plight.

• Members also were asked whether they would join a statewide IPA/HMO operated by Med-Chi if it were brought into existence:

Would join	46.4%
Would not join	22.6%
Undecided	31.0%

How would three or more of their five closest physician friends react to joining a Med-Chi operated IPA/HMO?

Would join	50.0%
Would not join	23.8%
No opinion	26.2%

How did we get the above data? Med-Chi initiated a **Quick-Response Network** in late 1986. Its first test was a great success in terms of the 168 responses and, more important, for the information gleaned.

Questionnaires were mailed on January 9, 1987 to 257 physicians. Of these, 150 went to members who responded to ads in *MMJ* or county/specialty society bulletins and who promised to participate in the Quick-Response Network. The other 107 surveys were sent to Med-Chi's Executive Committee and to officers of the component societies. The 168 responses added up to an amazing return rate: 65 percent overall; 53 percent within one week. In the meantime, a second survey netted a 98 percent return, which indicates respondents' serious commitment to making their views and opinions known.

Participation in the Quick-Response Network is open to all Med-Chi members who promise to respond within 10 days. Write to Joseph Jensen, Director for Health Policy Research and Information Systems, 1211 Cathedral St., Baltimore, MD 21201.

Do these survey results reflect your views?
Write **Letters to the Editor**
MMJ, 1211 Cathedral St.,
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In the Matter of
Kamakshi Neelkantan MD
Before the
Commission on
Medical Discipline

Consent Order
Findings of Fact, Conclusions of Law, and Order

Based on information coming to its attention the Commission on Medical Discipline of Maryland ("the Commission") determined that there were sufficient grounds to charge Kamakshi Neelkantan MD ("the Respondent") with violating one provision of §14-504 of Title 14 of the Health Occupations Article, Annotated Code of Maryland, the Maryland Medical Practice Act ("the Act"). The specific charge that the Commission found sufficient grounds to charge concerned the violation of §14-504(12) of the Act which provides:

> Subject to the hearing provisions of §14-505 of this subtitle, the Commission . . . may . . . reprimand any licensee, place any licensee on probation, or suspend or revoke a license if the licensee:
> (12) Willfully makes or files a false report or record in the practice of medicine;

Respondent became aware of the Commission's determination that there were sufficient grounds to charge by communications made by Robert L. Roth, Esquire, Administrative Prosecutor, to David R. Sonnenberg, Esquire, Council for Respondent. As a result of the communications between Mr. Roth and Mr. Sonnenberg, Respondent has indicated a willingness to accept the charges by the Commission of violating §14-504(12) of the Act.

Respondent was informed by her counsel of her right to have the facts that form the basis for the Commission's charges investigated and to challenge the facts that led the Commission to believe there was probable cause to charge the Respondent with a violation of the Act, and to be notified in writing of charges and the facts on which the charges were based. Respondent also was informed by her counsel of her right to have a hearing and to have thirty (30) days notice prior to a hearing. Respondent also was informed that this Consent Order shall serve as the final resolution of any action that the Commission could proceed with based on the acts set forth in or related to the Findings of Fact. Respondent knowingly, willfully, and intelligently waived her right to have the facts that form the basis for the Commission's charge investigated, to be charged by the Commission with violations of the Act as a result of facts that come to the attention of the Commission, and to have a hearing in this matter. In light of the discussions, and negotiation in this case, Respondent agrees to enter into the following Consent Order.

On instruction of the Council of the Medical and Chirurgical Faculty of the State of Maryland, "Findings of Fact, Conclusions of Law, and Order" will be published in the Maryland Medical Journal.

Findings of Fact

The Commission finds that:

1. At all times pertinent to the charges, Respondent was a physician, licensed to practice medicine in Maryland and subject to the jurisdiction of the Board;
2. At all times pertinent to the charges, Respondent practiced medicine in the State of Maryland under the employ of another Maryland licensed physician;
3. On or about August 16, 1985 Respondent was observed by the Maryland Attorney General's Medicaid Fraud Control Unit's investigators seated at a desk covered with medical records that had been subpoenaed from Respondent's employer by, but not yet turned over by Respondent's employer to, the Grand Jury of Baltimore City, which was investigating Respondent's employer for possible Medicaid fraud violations.
4. Respondent had in her possession numerous pens, pencils, and other writing instruments and partially completed medical records.
5. Respondent admitted to the investigators that she willingly altered medical records at the request of Respondent's employer.
6. These medical records were altered for use in connection with seeking reimbursement, by her employer, from the Medical Assistance Program.
7. Respondent was licensed to practice medicine on February 11, 1980 and, other than the events that form the basis of this action, has never been brought before the Commission for any violations of the Act.

Conclusions of Law

The Commission, by unanimous vote of those members considering this matter, concludes as a matter of law that the Respondent willfully made a false record in the practice of medicine violating Section 14-504(12) of the Act.

Order

Based on the foregoing Findings of Fact and Conclusions of Law it is this 20th day of January, 1987, by a unanimous vote of the quorum of those members of the Commission on Medical Discipline of Maryland considering this case:

ORDERED that Respondent, Kamakshi Neelkantan MD, an individual licensed to practice medicine in Maryland is hereby REPRIMANDED.

HILARY T. O'HERILHY MD, **Chairman**
Commission on Medical Discipline

Consent

By this Consent, I agree to accept the charges by the Commission of violating Section 14-504(12) of the Act and submit to this Order. I admit the Findings of Fact and Conclusions of Law preceeding the Order. I am

waiving my right to have the facts that form the basis for the Commission's charges investigated and to challenge the facts that led the Commission to believe that there was probable cause to charge me with a violation of the Act. I am waiving my right to be notified by the Commission in writing of the charges and the facts upon which the charges were based except as notified by this Consent Order. I acknowledge the validity of the Order as if made after a hearing at which I would have had the right to counsel, to confront witnesses, to give testimony, to call witnesses on my own behalf, and to all other substantive and procedural protections provided by law. I also recognize that I am waiving my right to appeal any adverse ruling of the Commission that might have followed any such hearing. By this Consent, I waive all such rights. I sign this Consent after consulting with my attorney and without reservation, and I fully understand its meaning.

This Consent is conditioned upon this Order serving as the final resolution of all disciplinary action which could be brought against me by virtue of the acts set forth in the Findings of Fact or which could be brought on the basis of any grounds related to such acts.

***KAMAKSHI NEELKANTAN* MD**

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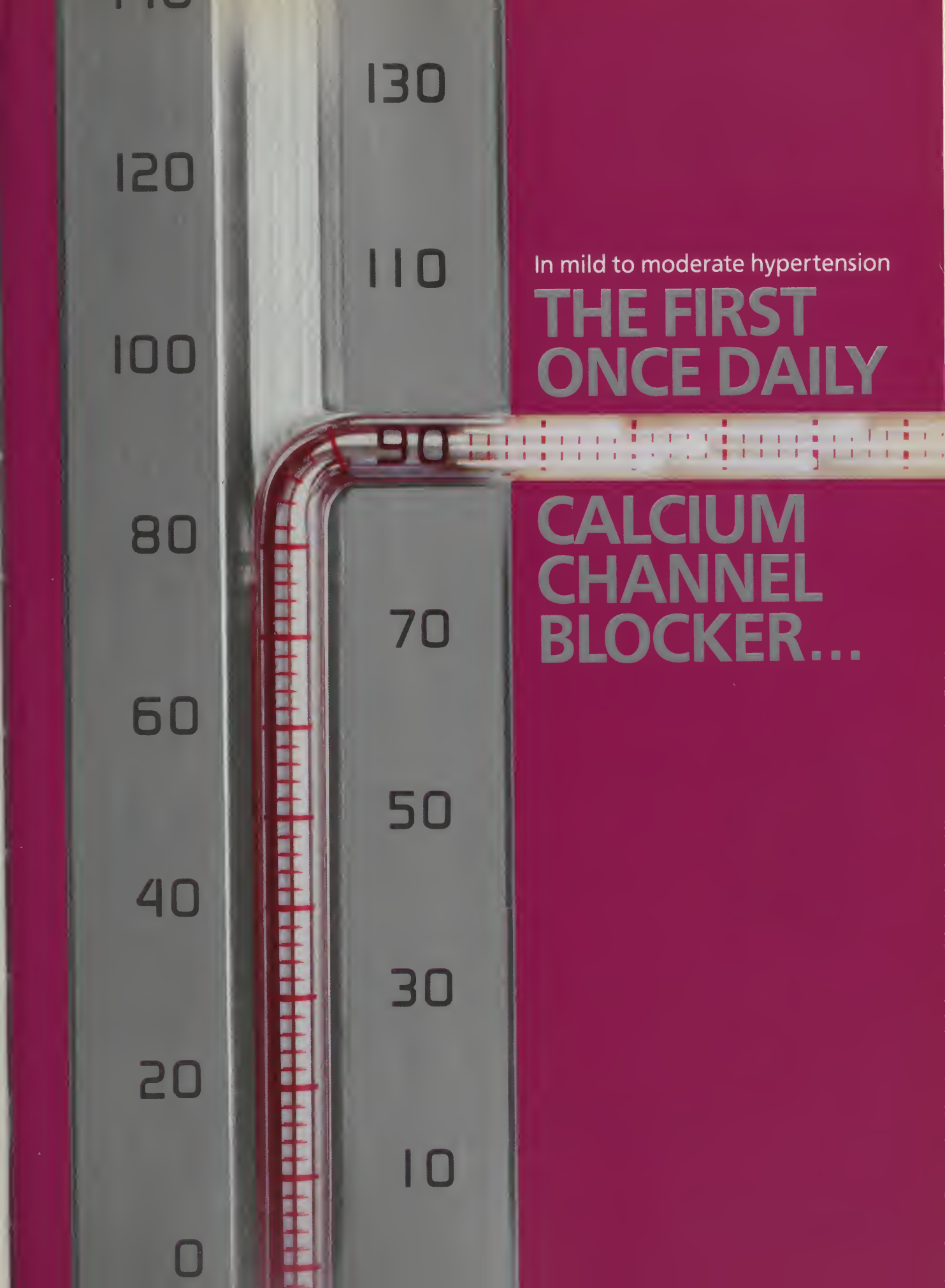
Redness and/or warmth in a joint

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In mild to moderate hypertension

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240 mg scored, sustained-release tablets



JAMES B.
38, black male, heavy smoker. Prescribed a diuretic by another physician last year for hypertension.

YOUR CONCERNS
Presents with "smoker's cough." Workup reveals a BP of 150/107.

A LOGICAL CHOICE FOR CONTROL OF HIS BP
ISOPTIN® (verapamil HCl/Knoll) because...
— Black hypertensives often have low plasma renin activity and generally do not respond favorably to beta blockers.
— Beta blockers may increase the likelihood of bronchospasm.

ALICE W.
65, diabetic, overweight. Her BP has elevated to 190/98.

YOUR CONCERNS
She's on daily insulin.

A LOGICAL CHOICE FOR CONTROL OF HER BP
ISOPTIN® (verapamil HCl/Knoll) because...
— Unlike most beta blockers and diuretics, ISOPTIN has no adverse effects on serum glucose levels.
— Unlike most beta blockers, ISOPTIN does not mask the symptoms of hypoglycemia.





THOMAS G.
70, asthmatic. In the past, BP adequately controlled with 25 mg hydrochlorothiazide daily.

YOUR CONCERNS
Today patient presents with symptoms of gout. Workup reveals high uric acid level, low serum potassium, and BP elevated to 180/98.

A LOGICAL CHOICE FOR CONTROL OF HIS BP
ISOPTIN® (verapamil HCl/Knoll) because...
— Unlike diuretics, ISOPTIN will not decrease serum potassium levels or elevate uric acid levels.
— Unlike beta blockers, ISOPTIN can be used safely in asthma and COPD patients.

JOHN K.
42, Annual physical uncovered diastolic BP of 102... confirmed on three successive office visits. Unresponsive to nonpharmacologic intervention.

YOUR CONCERNS
Salesman, spends many hours of his working day in car... total cholesterol level 300, HDL 35.

A LOGICAL CHOICE FOR CONTROL OF HIS BP
ISOPTIN® (verapamil HCl/Knoll) because...
— Unlike diuretics, ISOPTIN does not cause urinary urgency.
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Please see adjacent page for brief summary.

In mild to moderate hypertension

Brief Summary

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CONTRAINDICATIONS: 1) Severe left ventricular dysfunction (see WARNINGS), 2) Hypotension (less than 90 mmHg systolic pressure) or cardiogenic shock, 3) Sick sinus syndrome or 2nd or 3rd degree AV block (except in patients with a functioning artificial ventricular pacemaker).

WARNINGS: Heart Failure: ISOPTIN should be avoided in patients with severe left ventricular dysfunction (see DRUG INTERACTIONS). Patients with milder ventricular dysfunction should, if possible, be controlled before verapamil treatment. Hypotension: ISOPTIN (verapamil HCl) may produce occasional symptomatic hypotension. Elevated Liver Enzymes: Elevations of transaminases with and without concomitant elevations in alkaline phosphatase and bilirubin have been reported. Periodic monitoring of liver function in patients receiving verapamil is therefore prudent. Accessory Bypass Tract (Wolff-Parkinson-White): Patients with paroxysmal and/or chronic atrial flutter or atrial fibrillation and a coexisting accessory AV pathway have developed increased antegrade conduction across the accessory pathway producing a very rapid ventricular response or ventricular fibrillation after receiving intravenous verapamil. While this has not been reported with oral verapamil, it should be considered a potential risk. Treatment is usually D.C.-cardioversion. Atrioventricular Block: The effect of verapamil on AV conduction and the SA node may cause asymptomatic 1st degree AV block and transient bradycardia. Higher degrees of AV block, while infrequent (0.8%), may require a reduction in dosage or, in rare instances, discontinuation of verapamil HCl. Patients with Hypertrophic Cardiomyopathy (IHSS): Although verapamil has been used in the therapy of patients with IHSS, severe cardiovascular decompensation and death have been noted in this patient population.

PRECAUTIONS: Impaired Hepatic or Renal Function: Verapamil is highly metabolized by the liver with about 70% of an administered dose excreted in the urine. In patients with impaired hepatic or renal function verapamil should be administered cautiously and the patients monitored for abnormal prolongation of the PR interval or other signs of excessive pharmacological effects (see OVERDOSAGE).

Drug Interactions: Beta Blockers: Concomitant use of ISOPTIN and oral beta-adrenergic blocking agents may be beneficial in certain patients with chronic stable angina or hypertension, but available information is not sufficient to predict with confidence the effects of concurrent treatment in patients with left ventricular dysfunction or cardiac conduction abnormalities. Digitalis: Clinical use of verapamil in digitalized patients has shown the combination to be well tolerated if digoxin doses are properly adjusted. However, chronic verapamil treatment increases serum digoxin levels by 50 to 75% during the first week of therapy and this can result in digitalis toxicity. Upon discontinuation of ISOPTIN (verapamil HCl), the patient should be reassessed to avoid underdigitalization. Antihypertensive Agents: Verapamil administered concomitantly with oral antihypertensive agents (e.g., vasodilators, angiotensin-converting enzyme inhibitors, diuretics, beta blockers, prazosin) will usually have an additive effect on lowering blood pressure. Patients receiving these combinations should be appropriately monitored. Disopyramide: Disopyramide should not be administered within 48 hours before or 24 hours after verapamil administration. Quinidine: In patients with hypertrophic cardiomyopathy (IHSS), concomitant use of verapamil and quinidine resulted in significant hypotension. There has been a report of increased quinidine levels during verapamil therapy. Nitrates: The pharmacologic profile of verapamil and nitrates as well as clinical experience suggest beneficial interactions. Cimetidine: Two clinical trials have shown a lack of significant verapamil interaction with cimetidine. A third study showed cimetidine reduced verapamil clearance and increased elimination to 1/2. Anesthetic Agents: Verapamil may potentiate the activity of neuromuscular blocking agents and inhalation anesthetics. Carbamazepine: Verapamil may increase carbamazepine concentrations during combined therapy. Rifampin: Therapy with rifampin may markedly reduce oral verapamil bioavailability. Lithium: Verapamil may lower lithium levels in patient on chronic oral lithium therapy. Carcinogenesis, Mutagenesis, Impairment of Fertility: There was no evidence of a carcinogenic potential of verapamil administered to rats for two years. Verapamil was not mutagenic in the Ames test. Studies in female rats did not show impaired fertility. Effects on male fertility have not been determined. Pregnancy (Category C): There are no adequate and well-controlled studies in pregnant women. ISOPTIN crosses the placental barrier and can be detected in umbilical vein blood at delivery. This drug should be used during pregnancy, labor, and delivery, only if clearly needed. Nursing Mothers: ISOPTIN is excreted in human milk, therefore, nursing should be discontinued while verapamil is administered. Pediatric Use: Safety and efficacy of ISOPTIN in children below the age of 18 years have not been established.

ADVERSE REACTIONS: Constipation 8.4%, dizziness 3.5%, nausea 2.7%, hypotension 2.5%, edema 2.1%, headache 1.9%, CHF/pulmonary edema 1.8%, fatigue 1.7%, bradycardia 1.4%, 3° AV block 0.8%, flushing 0.1%, elevated liver enzymes (see WARNINGS). The following reactions, reported in less than 1.0% of patients, occurred under conditions (open trials, marketing experience) where a causal relationship is uncertain; they are mentioned to alert the physician to a possible relationship: angina pectoris, arthralgia and rash, AV block, blurred vision, cerebrovascular accident, chest pain, claudication, confusion, diarrhea, dry mouth, dyspnea, ecchymosis or bruising, equilibrium disorders, exanthema, gastrointestinal distress, gingival hyperplasia, gynecomastia, hair loss, hyperkeratosis, impotence, increased urination, insomnia, macules, muscle cramps, myocardial infarction, palpitations, paresthesia, psychotic symptoms, purpura (vasculitis), shakiness, somnolence, spotty menstruation, sweating, syncope, urticaria. Treatment of Acute Cardiovascular Adverse Reactions: Whenever severe hypotension or complete AV block occur following oral administration of verapamil, the appropriate emergency measures should be applied immediately, e.g., intravenously administered isoproterenol HCl, levarterenol bitartrate, atropine (all in the usual doses), or calcium gluconate (10% solution). If further support is necessary, inotropic agents (dopamine or dobutamine) may be administered. Actual treatment and dosage should depend on the severity and the clinical situation and the judgment and experience of the treating physician.

OVERDOSAGE: Treatment of overdosage should be supportive. Beta-adrenergic stimulation or parenteral administration of calcium solutions may increase calcium ion flux across the slow channel, and have been used effectively in treatment of deliberate overdosage with verapamil. Clinically significant hypotensive reactions or fixed high degree AV block should be treated with vasopressor agents or cardiac pacing, respectively. Asystole should be handled by the usual measures including cardiopulmonary resuscitation.

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May 22 Seventeenth Anniversary Meeting of the Retinal Vascular Center—Clinical Trials and The Practice of Ophthalmology. Fee: $190, residents and fellows $100. Info: D. Heydinger 301-955-6046.

Jun 4–5 Eighth Annual Intensive Training in Spirometry Testing. Fee: $350. Info: J. Corn 301-955-2609.

Jun 8–10 Toxicology Update '87. Appropriate credit pending. Info: J. Corn 301-955-2609.

Jun 15–16 An Advanced Pediatric Life Support Course. Fee: $375, 20 AMA Cat I credits, 19 ACEP Cat I credits. Info: C. Sentman 301-955-6085.

Jul 9 Planning Functional Endoscopic Surgery by CT. Fee: $150; AMA Cat I credits. Info: C. Kearney 301-955-3168.

Jul 13–17 Control of Biohazards in the Research Laboratory. Info: F.S. Tepper 301-955-5918 or J. Corn 301-955-2609.

Johns Hopkins Medical Grand Rounds: audiocassettes, slides, and booklet. 30 topics and 40 AMA Cat I credits/year. Contact 301-955-3988, Office of Continuing Education, 720 Rutland Ave., Baltimore, MD 21205.

Ophthalmic Electrophysiology Technician Training Course (on-going 1-week course by appointment), The Wilmer Eye Institute, Baltimore. Info: C.M. Kearney.

The Department of Radiology and Radiological Science offers several courses in abdominal and obstetrical ultrasound: Courses scheduled 1/12/87–12/7/87. Info: J. Mosmiller 301-955-8450.

Basic Practicum, Nov 16–20. Fee: $460; 40 AMA Cat I credits.

Advanced Practicum in Ultrasound Dec 7–11. Fee: $460; 40 AMA Cat I credits.

Visiting Physicians is offered throughout the year, by appointment only. Fee: $460; 40 AMA Cat I credits.

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University of Maryland School of Medicine

CME Courses: For each course additional information may be obtained by contacting Program of Continuing Education, University of Maryland School of Medicine, Room 300, MSTF, 10 South Pine St., Baltimore, MD 21201 (301-328-3956).

June 4–6 Annual OB/GYN Symposium, Sheraton Fontainebleau Inn and Spa, Ocean City. Fee $275; 11 ACOG cognates, 11.25 AMA Cat I and AAFP credits.

June 12 Topics in Ophthalmologic Surgery, Cataract Surgery and the Socioeconomic Issues Facing Ophthalmologists Today, Columbia Inn, Columbia, MD. Info: Maryland Society of Eye Physicians and Surgeons at 7901 Annapolis Rd., Lanham, MD 20706 (301-459-2986).

Jun 21–26 13th Annual Family Medicine Review Course, Carousel Hotel, Ocean City. Fee: $395, 22 AMA Cat I and AAFP credits.

Jun 25–27 Dermatology Days, Carousel Hotel, Ocean City. Fee: $250 before Jun 1; $275 thereafter; 12.75 AMA Cat I and AAFP credits.

Visiting Professor Programs—Directory of speakers and topics available for area hospitals and other health care organizations. An administrative fee is charged. Info: 301-328-3956.

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Miscellaneous Meetings

May 21 Update of Epidemiological Studies in Autoimmune Diseases, Maryland Society for the Rheumatic Diseases. Meeting at the Johns Hopkins Club. Info and reservations: K. Krug, 301-366-0923.

May 23–25 Gynecologic Urology and Pelvic Surgery, Medical College of Virginia CME Activity, Williamsburg Hospitality House. Fee: $260. Info: K. Martin, 804-786-0494.

May 28–29 First National Symposium on AIDS Prevention: Strategies for Curbing the Epidemic, Omni International Hotel, Baltimore. Info: D. Nelinson, Mental Health Program Director, The Health & Education Council, 7201 Rossville Blvd, Baltimore, MD 21237 (301-686-3610).

Jun 3–7 Eleventh Annual Postgraduate Course on Rehabilitation of the Brain-Injured Adult and Child, Medical College of Virginia CME Activity, Williamsburg Hilton. Fee: $285. Info: K. Martin, 804-786-0494.

Jun 15–17 Management of Clinically Localized Prostate Cancer, NIH Consensus Development Conference, Warren Grant Magnuson Clinical Center, Bethesda. Info: N. Cowan, Prospect Assoc., 1801 Rockville Pike, Ste 500, Rockville, MD 20852 (301-468-6555).

Jul 6–8 NIH Consensus Development Conference: The Differential Diagnosis of Dementing Diseases, Warren Grant Magnuson Clinical Center, NIH, Bethesda. Info: M. Bernstein, Prospect Assoc.,

Ste 500, 1801 Rockville Pike, Rockville, MD 20852 (301-468-6555).

Jul 13–15 NIH Consensus Development Conference: Neurofibromatosis, Warren Grant Magnuson Clinical Center, NIH, Bethesda. Info: B. McChesney, Prospect Assoc., Ste 500, 1801 Rockville Pike, Rockville, MD 20852 (301-468-6555).

Jul 17–19 Practical Internal Medicine: Selected Topics for the Internist, Medical College of Virginia CME Activity, Cavalier Resort, Virginia Beach, VA. Fee: $295. Info: K. Martin, 804-786-0494.

Jul 31–Aug 2 Ninth Annual Pediatric Primary Care Conference: Pediatrics at the Beach, Medical College of Virginia CME Activity, Cavalier Resort, Virginia Beach, VA. Fee: $275. Info: K. Martin, 804-786-0494.

Future Med-Chi Meetings

Semiannual
January 1988
Maui, Hawaii

1988 Annual
April 27–29
Baltimore Convention Center

1988 Semiannual
September 14–18
Bermuda

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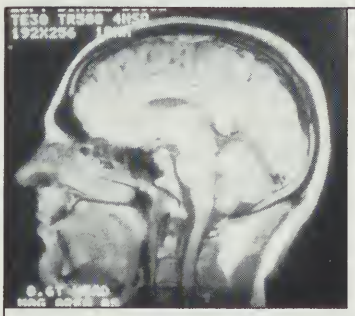
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- **Stroke Rehabilitation Outcomes at Montebello Hospital**
- **Emergency CT of the Head: Indications and Utilization**
- **Commentary: Emergency Computed Tomography of the Head**
- **Prognostic Considerations Related to Left Dominant Coronary Anatomy and Coronary Atherosclerosis**



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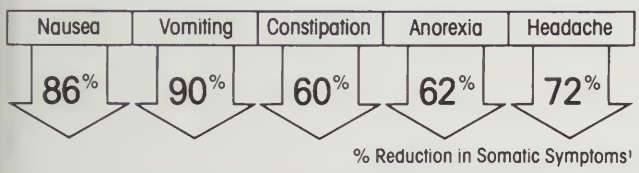
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References: 1. Feighner JP, *et al: Psychopharmacology 61*:217-225, Mar 22, 1979. **2.** Data on file, Hoffmann-La Roche Inc., Nutley, NJ.

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Warnings: Use with great care in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur in patients taking tricyclic antidepressants and anticholinergic-type drugs. Closely supervise cardiovascular patients. (Arrhythmias, sinus tachycardia and prolongation of conduction time reported with use of tricyclic antidepressants, especially high doses. Myocardial infarction and stroke reported with use of this class of drugs.) Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving).

***Usage in Pregnancy:* Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Since physical and psychological dependence to chlordiazepoxide have been reported rarely, use caution in administering Limbitrol to addiction-prone individuals or those who might increase dosage; withdrawal symptoms following discontinuation of either component alone have been reported (nausea, headache and malaise for amitriptyline; symptoms [including convulsions] similar to those of barbiturate withdrawal for chlordiazepoxide).

Precautions: Use with caution in patients with a history of seizures, in hyperthyroid patients or those on thyroid medication, and in patients with impaired renal or hepatic function. Because of the possibility of suicide in depressed patients, do not permit easy access to large quantities in these patients. Periodic liver function tests and blood counts are recommended during prolonged treatment. Amitriptyline component may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady state concentrations of the tricyclic drugs. Concomitant use of Limbitrol with other psychotropic drugs has not been evaluated; sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Limbitrol should not be taken during the nursing period. Not recommended in children under 12. In the elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects.

Adverse Reactions: Most frequently reported are those associated with either component alone: drowsiness, dry mouth, constipation, blurred vision, dizziness and bloating. Less frequently occurring reactions include vivid dreams, impotence, tremor, confusion and nasal congestion. Many depressive symptoms including anorexia, fatigue, weakness, restlessness and lethargy have been reported as side effects of both Limbitrol and amitriptyline. Granulocytopenia, jaundice and hepatic dysfunction have been observed rarely.

The following list includes adverse reactions not reported with Limbitrol but requiring consideration because they have been reported with one or both components or closely related drugs:

Cardiovascular: Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke.

Psychiatric: Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania and increased or decreased libido.

Neurologic: Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns.

Anticholinergic: Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract.

Allergic: Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus.

Hematologic: Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia.

Gastrointestinal: Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue.

Endocrine: Testicular swelling and gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion.

Other: Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.

Overdosage: Immediately hospitalize patient suspected of having taken an overdose. Treatment is symptomatic and supportive. I.V. administration of 1 to 3 mg physostigmine salicylate has been reported to reverse the symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.

Dosage: Individualize according to symptom severity and patient response. Reduce to smallest effective dosage when satisfactory response is obtained. Larger portion of daily dose may be taken at bedtime. Single *h.s.* dose may suffice for some patients. Lower dosages are recommended for the elderly. Limbitrol DS (double strength) Tablets, initial dosage of three or four tablets daily in divided doses, increased up to six tablets or decreased to two tablets daily as required. Limbitrol Tablets, initial dosage of three or four tablets daily in divided doses, for patients who do not tolerate higher doses.

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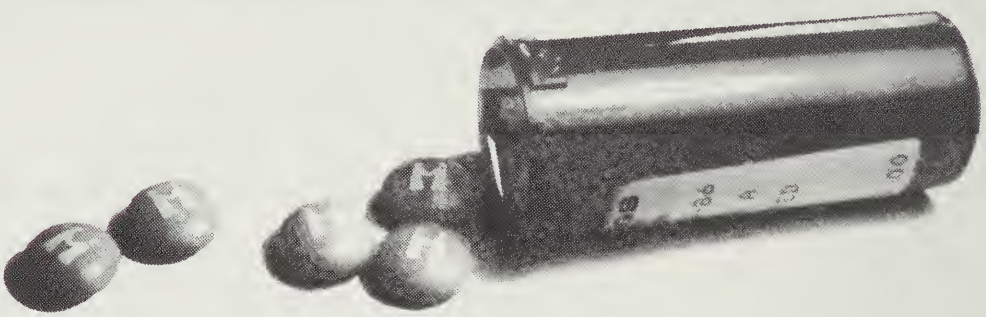
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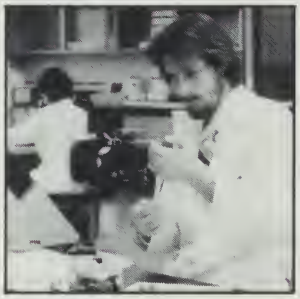
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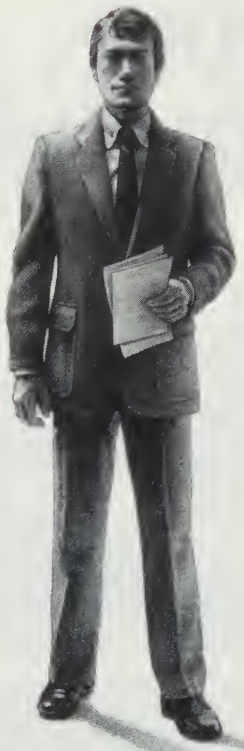
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Cover: "Big Ben," submitted by Andrew M. Munster MD, won second prize in the color category of Med-Chi's annual photo contest. A full report on the contest winners will appear in the August issue of *MMJ*.

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Hypertension in Pregnancy I

JOHN T. REPKE MD

Part I of a two-part series presents definitions, epidemiology, and the basic pathophysiology of pregnancy induced hypertension (PIH) as it is currently understood. Recognition of the patient profile for the risk of pregnancy induced hypertension as well as diagnosis and evaluation will be discussed. Treatment and problems encountered in the treatment of PIH will follow in Part II.

Dr. Repke is Assistant Professor, Department of Gynecology and Obstetrics, The Johns Hopkins Hospital and School of Medicine, Baltimore.

Hypertensive disorders complicating pregnancy have been defined by the Committee on Terminology of the American College of Obstetricians and Gynecologists as follows:[1]

Hypertension: systolic blood pressure >140 mm Hg; diastolic blood pressure >90 mm Hg; or a systolic increase of 30 mm Hg, diastolic increase of 15 mm Hg.

Proteinuria: >300 mg/1/24 hours or >1 gm/1 in at least two random urine specimens six or more hours apart.

Preeclampsia: development of hypertension with proteinuria, edema, or both after the 20th week of gestation.

Eclampsia: occurrence of convulsions in a preeclamptic in the absence of any coincidental neurologic disease.

Chronic hypertension: presence of persistent hypertension of whatever cause prior to the 20th week of gestation in the neoplastic trophoblastic disease.

Superimposed preeclampsia or eclampsia: development of preeclampsia or eclampsia in a woman with chronic hypertensive vascular or renal disease.

Gestational hypertension: Hypertension developing in the latter half of pregnancy, not accompanied by other evidence of preeclampsia or hypertensive vascular disease.

Severe preeclampsia: blood pressure >160/110, proteinuria >5 gm in 24 hour, oliguria <500 ccs in 24 hours, or a rising serum creatinine, persisting visual disturbances, epigastric or right upper quadrant pain, pulmonary edema or cyanosis, thrombocytopenia or overt hemolysis, hepatocellular damage, intrauterine growth retardation.

Magnitude of Problem and Etiologies

Preeclampsia complicates 5 percent to 7 percent of all pregnancies in the United States and is one of the three major causes of maternal mortality (up to 10 percent). An increased perinatal mortality is associated with eclampsia (16 percent), preeclampsia (6 percent), chronic hypertension with superimposed preeclampsia (16 percent to 41 percent), and chronic hypertension (8 percent to 15 percent). Many etiologies for hypertensive disease in pregnancy have been suggested including hyperplacentation, placental ischemia, and immunologic, genetic, and infectious processes.

Epidemiology

Hypertensive disease in pregnancy is noted to be a disease primarily of the prima gravida or the older gravida. Slight increases in incidence in multiparious patients having a child by a new consort have been reported.

Nutritional factors have been implicated in the etiology of hypertensive disease in pregnancy. Recent studies have looked at the association of serum calcium and hypertension.[2,3] Additionally, epidemiologic data and experimental data supporting the association of calcium and lowered blood pressure have been reviewed by Villar, Repke, and Belizan.[4]

Other epidemiologic associations include diabetes, multiple gestations, fetal hydrops, hydatidiform mole, and other diseases of hyperplacentation. It is also known that hypertensive disease in pregnancy occurs more often in black females, even after correction for age and parity. The daughter vs. daughter-in-law data of Chesley (1968) documents a familial tendency in the development of preeclampsia and eclampsia.[5] Chesley noted that preeclampsia developed in 26 percent of the daughters of mothers with preeclampsia *vs.* 5 percent in daughters-in-law; eclampsia occurred at a rate of 2 percent in daughters *vs.* a rate of 0.1 percent in daughters-in-law.

Pathophysiology

In normal pregnancy, cardiac output is increased by 30 to 40 percent by the twenty-fourth week of pregnancy. Blood volume is increased by 50 percent with an increase in red cell mass of 30 percent. Arterial blood pressure will decrease in normal pregnancy, with a decrease in peripheral resistance as well.

The development of hypertension may cause a baroceptor-mediated decrease in cardiac output. The renin-angiotensin-aldosterone system is known to function in

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the development of pregnancy induced hypertension. We know there is a marked increase in renin during normal pregnancy. Renin is synthesized in the granules in the afferent arterioles of the kidney, but the placenta and uterus are also responsible for renin production. Despite increases in renin production, renal blood flow generally remains constant within an autoregulatory range (mean arterial pressure of 80–140 mm Hg); despite this renin production increase, the renal vasculature will remain dilated. This is probably secondary to the effects of the vasodilating prostaglandins, specifically, prostacyclin and prostaglandin-E_2.

Despite the expanding intravascular volume occurring in pregnancy, renin secretion continues to increase. Both plasma renin activity and plasma aldosterone are elevated in the pregnant *vs.* the nonpregnant state. Uterine renin may contribute to the control of uterine blood flow by regulating the synthesis of angiotensin II and prostaglandin-E.

Experimentally, indomethacin administration to nephrectomized pregnant rabbits has resulted in decreased uterine blood flow.[6] It has also been shown that uterine vein prostaglandin-E is decreased after the administration of captopril. Of clinical significance is that when captopril was given to pregnant rabbits, fetal survival was 14 percent compared with 99 percent fetal survival in controls.[7] In summary, normal pregnancy is a state of relative angiotensin resistance requiring increased renin secretion for maintenance of arterial pressure.

An increasing body of evidence suggests that increased synthesis of the vasodilating prostaglandins by the kidney and uterus during pregnancy have an important role in the physiological changes that occur in the pregnant vasculature. Pregnancy has been noted to have some similarities to Bartter's syndrome, which is a syndrome of angiotensin insensitivity, low to normal blood pressures, high plasma renin levels, and elevated excretion of urinary prostaglandin-E_2. There also may be an increased synthesis of prostacyclin in both Bartter's syndrome and pregnancy. These similarities have led to the hypothesis that perhaps the relative angiotensin insensitivity seen in pregnancy is due to an increase in synthesis of the vasodilating prostaglandins.

Normal *vs.* Hypertensive Pregnancy

There is some degree of difference in the physiologic changes observed during normal pregnancy and hypertensive pregnancy. The elegant data of Gant *et al.* suggested that angiotensin refractoriness was diminished beginning at approximately the eighteenth week of pregnancy in those patients who became hypertensive.[8] Even among chronic hypertensives, one is able to observe this increase in angiotensin sensitivity. These findings have led to testing the hypotheses that: (1) angiotensin concentration changes in those patients who become hypertensive; (2) there is an increased volume deficit in those patients who become hypertensive; or (3) vascular smooth muscle responsiveness has changed in those patients who become hypertensive.

Gant *et al.*[8] have proposed hypothetical models that suggest it is the change in vessel resistance to angiotensin II that plays the major role in the pregnant patient's response to angiotensin. Additionally, in work presented by Everett *et al.*[9] a role has been proposed for a progestin metabolite (5-alphadihydroprogesterone) in the altered pressor response. Of interest is that the effective pressor dose of angiotensin II may be increased after the administration of theophylline, leading to the theory that cyclic-AMP may mediate the vessel response to the pressor effects of angiotensin II. Based on this experimental data, the following conclusions may be made: (1) Pregnant women are refractory to the pressor effects of angiotensin II. (2) Vascular refractoriness is principally the consequence of decreased smooth muscle responsiveness to angiotensin II. (3) This vascular refractoriness probably involves localized prostaglandin in action, mediated through cyclic nucleotides. (4) Progesterone and/or progesterone metabolites may mediate the synthesis or breakdown of locally produced prostaglandins. (5) Women who develop pregnancy induced hypertension begin to lose angiotensin II refractoriness as early as 18 weeks prior to the development of hypertension. (6) Once hypertension is detected, the disease is already advanced. (7) Regardless of how well maternal hypertension is controlled, the underlying pathologic vascular sensitivity to angiotensin II persists.[10]

Recognition of Disease

The proper identification, evaluation, and management of the hypertensive pregnant patient is essential. Failure to recognize early disease, procrastination, failure to hospitalize these patients at an early date, or failure to recognize impending disease will lead to increased maternal and perinatal morbidity and mortality. The major emphasis in pregnancy induced hypertension should be prevention of progression to more serious disease.

Diagnosis and Evaluation

Patients at risk for preeclampsia and eclampsia (pregnancy induced hypertension) tend to be primigravidas, from lower socioeconomic groups, and are very often young, although older primigravidas are also at risk. Nutritional factors may play a role in the development of preeclampsia and eclampsia. Other factors contributing to the patients at risk for the development of pregnancy induced hypertension include diabetes, renal disease, underlying chronic hypertension, twins, and polyhydramnios.

When a diagnosis of pregnancy induced hypertension is entertained, a complete history and a physical examination are essential. This should include a thorough cardiac examination as well as a thorough funduscope examination looking specifically for segmental arterio-

lar narrowing, classically described as sausage-shaped arterioles. Determination of accurate gestational age is also important.

Laboratory tests should include a complete blood count and indices, platelet count, electrolytes, BUN, serum creatinine, uric acid, LDH, SGOT, SGPT, alkaline phosphatase, a urinalysis, a 24-hour urine collection for creatinine clearance and protein, a chest x-ray where indicated, and an electrocardiogram. Sonographic assessment of the fetus may also be valuable in attempting to identify intrauterine growth retardation. If the gestational age is appropriate for the performance of other antenatal testing, such as nonstress testing and/or oxytocin challenge testing, these tests should be used liberally where indicated.

The major points in the management of pregnancy induced hypertension are to evaluate quickly the severity of the disease, to treat correctable disease, to understand what drugs are available for treatment, to consider fetal well-being, and to prevent further exacerbation of pregnancy induced hypertension. Specifically, one should prevent the development of eclampsia or the development of cerebral vascular accident in the mother due to uncontrolled blood pressure. Additionally, one would hope to prevent stillbirth or neonatal death and, with these thoughts in mind, choose a course of therapy that will be most beneficial to both mother and infant.

Treatment of preeclampsia, eclampsia to prevent maternal, fetal, and neonatal morbidity and mortality; management of hypertensive emergencies; and postoperative and postdelivery management will be presented in next month's *HBP Commentary*.

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Epidermoid Carcinoma of the Head & Neck: Epidemiology and Etiology

Head and neck cancers constitute 5 percent of cancers in men and 2 percent of cancers in women. These are disabling to the patient, may cause a drastic change in personal appearance, and often cause death. Among the cancers that occur in the head and neck area, 80 percent are squamous cell carcinomas, while the other 20 percent are salivary gland tumors, thyroid carcinomas, and soft tissue and bone sarcomas. In 1987, 41,900 (30,000 men and 11,900 women) new cases of squamous cell carcinomas will be diagnosed in the US, and 13,200 (9,450 men and 3,750 women) will die of the disease. Of these, over 700 new cases will be diagnosed and about 250 will die in Maryland. Excluded from these figures are skin cancers, melanoma, lymphoma, odontogenic tumors, and thyroid cancers.

The incidence of cancer of the oral cavity and pharynx is more than twice that of the larynx and more common in the southern and western parts of the country. However, there is no geographical distribution for laryngeal cancer. Carcinoma of the lip rarely occurs in black people. Cancers of the nasal cavity and paranasal sinuses are rare and constitute less than 5 percent of head and neck cancer.

The incidence of cancer of the head and neck is higher in France, Italy, Switzerland, Scotland, and Ireland but lower in England, Japan, West Germany, and the Scandinavian countries, when compared to the US. On the other hand, cancer of the nasopharynx is common in China, and there is a relatively high incidence in native-born and first-generation Chinese in this country.

Etiology

It can generally be estimated that 75 percent of cancers of the oral cavity, pharynx, and larynx are associated with heavy tobacco or alcohol consumption or both. There is evidence of a synergistic interaction between alcohol and tobacco: each factor alone accounts for a two- to threefold increase in risk; jointly these can increase the risk 15 times compared to those who neither smoke nor drink. It has been estimated that these cancer incidences could be reduced to 25 percent if alcohol and tobacco were not used excessively.

A viral etiology has been proposed for nasopharyngeal cancer, as some studies have suggested a relationship between the Epstein-Barr virus and the disease. Some studies have also shown the association with tertiary syphilis (which is rare these days), extended exposure to wood and metal dust, ingestion of hot drinks and spicy foods, and neglect of oral hygiene.

It also has been claimed that extended exposure to various other noxious fumes and chemicals may lead to carcinomas of the upper aerodigestive tract. The chewing of betel nut and/or tobacco predispose users to cancer of the oral cavity. Other carcinogens include nitrosamines, leather manufacturing, textile industries, snuff, polycyclic aromatic hydrocarbons (coke ovens), mustard gas, and nickel refining. Ultraviolet rays of the sun and ionizing radiation have been blamed for carcinoma of the lip.

Plummer-Vinson Syndrome has been reported to predispose to squamous cell carcinoma of the hypopharynx and cervical esophagus. Lye and other chemical burns may play a role in carcinomas of the cervical esophagus.

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Physicians' Emotional Reactions to Being Sued

LINO COVI MD

Being sued for malpractice is one of the most severe stresses a physician ever experiences. Many factors contribute to the type and degree of emotional reaction to it. One of the most important is the conflict between the physician's expectation of a doctor-patient relationship based on trust and emotional support, and the reality of his or her being the target of attack by a legal system and being accused as the vendor of a defective product. While lawyers consider this process "just business," physicians may experience it as a personal assault.

The immediate reaction to being sued is usually anger, which may be an appropriate and adaptive response if of short duration and leading to suitable action. On the other hand, a persistent emotional upset obviously is maladaptive. Sara Charles MD, a Chicago psychiatrist who has conducted well-designed studies on the problem and has published extensively,[1,2] found two clearly identifiable groups of symptoms in a percentage of members of the Chicago Medical Society who had been sued. She studied physicians who had been sued and those who were not, to insure that what was observed was not just the effect of the pressure of the malpractice crisis. Sixty-eight doctors (19.2 percent) reported depressed mood, insomnia, loss of appetite, loss of interest in normal activities, social withdrawal, feeling of guilt or shame, low self-esteem, decreased sex drive, and suicidal ideation: a syndrome she identifies as "depression cluster." Sixty-one doctors (17.2 percent) reported pervasive anger, depressed mood, inner tension, frustration, irritability, insomnia, fatigue, gastrointestinal symptoms, and headache: a syndrome she calls "anger cluster" that appears to be a mixture of anxiety and depression. Nineteen doctors (5.4 percent) noted exacerbation of a previously diagnosed illness. Only eight (2.3 percent) reported no symptoms at all.

The professional activities of the physicians who had been sued were affected more deeply than those who were not sued but who also reported being affected by the malpractice crisis. The sued doctors decreased their working hours while the nonsued doctors increased them.

Forty-three percent of sued subjects *vs.* 33 percent of nonsued subjects had stopped performing certain high-risk procedures; 49 percent of the sued doctors were likely to stop seeing patients with whom the risk of litigation was greater, while only 29 percent of the nonsued reported doing that. Forty-three percent of sued subjects (*vs.* 30 percent of nonsued subjects) were thinking of retiring early. The effect on continuing education activities was interesting: 30 percent of sued doctors *vs.* 39 percent of nonsued doctors increased their reading of professional literature; 27 percent of sued *vs.* 31 percent of nonsued subjects attended more CME courses.

These data clearly indicate an effect of demoralization on the sued physicians; their patients probably would also suffer some consequences.

What devices do physicians use to cope with these reactions? Although the consensus is that the typical mechanism of our profession is suppression and silence in situations of stress, authors like McCue[3] have questioned whether awareness and open discussion of stress and its impact are useful for physicians. Dr. Charles found responders to her studies quite eager to express their emotions.

Other findings of interest were that an unexpectedly small number of academic physicians were found to have been sued, leading to the conclusion that these groups of doctors may perceive the malpractice phenomenon quite differently. In contrast to the sued physicians, the nonsued physicians in one of Charles' studies did not feel very strongly that plaintiffs' cases are unjustified, that litigation is an affront to one's competence, or that settling a suit is an admission of guilt. From these observations, Dr. Charles concludes that the experience of being sued changes the doctor's attitude. The corollary may very well be that doctors being sued are not finding a sufficiently sympathetic audience among collegues who have not had that experience. They, therefore, may need access either to a peer group with similar experiences or perhaps to psychotherapeutic support.

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The Importance of the Comprehensive Medical History

E.T. LISANSKY MD

Understanding disease as a biomedical event is an important part of a larger and less well-defined discipline and responsibility: the practice of comprehensive medicine as a humanistic endeavor and the consideration of "illness" as a human event. This biopsychosocial concept includes the recognition by the physician of predisposing and precipitating dynamic internal and external factors acting on this patient and the family long before the advent of manifest clinical signs and symptoms. It also includes the need for prescience of the continued effect of these same factors that may alter the unique natural history of this patient's disease process and influence morbidity, mortality, or resolution, for better or worse.

Each patient in his or her own inimitable way casts a long shadow. An old proverb states: "What's bred in the bone is betrayed in the flesh." Thus, what is known about disease is enhanced by a *special* knowledge about this sick person, his internal and external environment, and his illness. Behavioral and cognitive skills in comprehensive interviewing facilitate an empathic attitude for the person, the disease, and the illness allowing accurate and comprehensive diagnosis and effective and compassionate care.[1–13]

Medical technology has improved our diagnostic and therapeutic endeavors. However, the interposition of new complex procedures requiring teams to run the machinery and the need for many specialist consultants may decouple and distance the primary care professional from the patient and his or her family as they look for answers from a host of people. Human need has not diminished but rather has increased in importance. Mechanistic advances may diminish the time-honored status of "the history," and the process of the initial and continuous bonding between patient and doctor may be attenuated. This intrusion requires a renewal of emphasis on the *comprehensive interview*, the key to the humanistic care of a patient and to the practice of medicine.

> *The stone which the builders rejected is become the chief corner stone.* Psalms 118:22

The physician's *knowledge* of the dynamics of the developmental stages of human behavior and his or her technical *skill* in interviewing are essential (but insufficient) without an *attitude* engendered by conscious awareness of and insight into his or her own personality development and behavior as a person and as a professional. One should not rely entirely on one's previous social conditioning and behavior to successfully conduct a goal-directed, professional interview that elicits material from diverse areas of the patient's past and present history, including physical signs and symptoms and the patient's feeling about oneself and others.[14–17]

Medical students are more attracted to learning about the techniques of physical diagnosis than the seemingly more mundane and perhaps more intimidating task of talking with a sick stranger about the private disturbances of his or her body and mood. The physical examination is a natural sequence to the hard-earned knowledge of anatomy and fascinating logic and reality of dynamic physiology and biochemistry. However, students are unprepared for the challenges of talking with a medical patient and of adopting the role of a student-physician.

This is a strange and embarrassing, albeit necessary, confrontation compared with the tidy challenge and accomplishment of feeling the tip of the spleen, hearing a subtle mitral diastolic murmur, or seeing a small retinal hemorrhage. It can seem awkward and grotesque when a young, strong, active person is required to elicit an intimate and halting disclosure from an older sick stranger about pain and dysfunction, fear of disease and disability, weakness and shortness of breath, helplessness and hopelessness, despair and addiction, indigestion and insomnia, and especially sex, money, self-esteem, death, and dying. A feeling of unnatural intrusion must be a part of this transaction for many medical students.

Dr. John Whitehorn, former Professor of Psychiatry at The Johns Hopkins University Medical School encouraged medical students not to be frustrated by the unrealistic challenge of curing their patients and suggested they listen, talk with, and learn from the medical patient—because they both will benefit from this exchange. He added that the patient will be the best and most available teacher. This kind of confrontation becomes a "learning" as well as a "doing" experience providing gratification in understanding and caring for the patient and easing the frustration engendered by an incomplete diagnosis and the inability to cure. To learn about illness one must develop an alliance with the patient, a therapeutic relationship.

Preconditioning

Early on in medical school, the exposure to psychiatry, the introduction to medical diagnosis, and talking with diverse patients may arouse preconditioned feelings of which the young, healthy, middle-class student physicians may have been unaware. Adult human behavior is partly a function of early environmental con-

This column is contributed by the Public Relations Committee of the Medical and Chirurgical Faculty of Maryland. We encourage readers to share their thoughts and experiences on the subject. Med-Chi, Public Relations, 1211 Cathedral Street, Baltimore, MD 21201; James E. Bell MD, Chairman; Bernard R. Shochet MD, Editor.

ditioning, and one may manifest attitudes of likes, dislikes, avoidance, and acceptance of different kinds of people and various diseases.[17–19] As a doctor matures, he or she learns to monitor feelings that might interfere with an understanding and compassionate approach to every patient with any disease. It may take considerable experience with many patients with diverse multiple illnesses (as well as the maturing process of one's own family and life experiences) to develop an accepting biopsychosocial perspective and attitude toward people and illnesses previously, and perhaps even now, unacceptable.

Treating patients with tuberculosis or venereal disease, people of different race, color, or religion and even of different social "class" engendered negative attitudes in the past. Today we still find negative attitudes toward several categories of patients: the overtly psychotic and the depressed, the homosexual, the anorexic/bulimic, the sociopath, the alcoholic, the diabetic recidivist, the hypochondriacal, the drug or alcohol addict, the terminal patient, and those who have AIDS. These patients usually are treated adequately for their biomedical problems. Their psychosocial needs and instruction for their continued care may be unmet even when a referral to a more appropriate physician or facility is available. Thus they may be half-treated and obliquely avoided. As an example, the alcoholic has a number of acute and chronic medical complications that directly involve biomedical care but allow the physician to escape the burden of the basic diagnosis of alcoholism. He or she accepts and treats the organic half of the diagnosis and avoids the behavioral half, retaining the posture and fulfilling the function of a useful medical professional while abrogating a signal responsibility. Leon Eisenberg wrote

> We will do ourselves and our patients a disservice if we fail to acknowledge the sizable domain of irreducible subjectivity in medicine. For it is precisely here that patients are most in need of the skills of physicians with insight into themselves as well as their patients and the social content in which they live.[15]

In many textbooks a chapter on History Taking usually comes first, is read hastily (if at all), is summarily dismissed without discussion or even mention, and is considered by some medical school faculties as a necessary, appropriate, but unimportant introduction. Certain questions are memorized, data mechanically recorded and subdivided into the chief complaint, present illness, system review, and past medical and social history. In many medical schools, history taking was and perhaps still is taught by the very brightest, upwardly mobile, younger, mechanistically and research-oriented, and least clinically experienced teachers of the faculty and is unwittingly deemphasized and devalued as a mundane transaction within the easy grasp of every beginning medical student with a moderate degree of education, vocabulary, and social amenity.

Mature Role Model

I respectfully suggest that teaching *comprehensive* history to a student-physician requires the presence of a senior physician who is an expert in general medicine. Long-standing experience (with success and failure of judgment and decision making) has prepared him or her to be able to talk with patients and to care for them. Ancillary experts in communication, anthropologists, sociologists, and psychologists are helpful in the teaching-and-learning process but cannot replace a physician who has at least ten years of singular and personal responsibility for taking care of patients with complex medical problems and who has fortified his or her education by acquiring knowledge through personal experience or study in psychiatry. Medical school education, from time immemorial, has been taught most successfully by such "role models" as William Osler, Maurice Pincoffs, Theodore Woodward, Edward Cotter, Philip Tumulty, and George Engel.

The initial comprehensive interview is *not* a casual social interaction in the usual sense of asking 20, 30, or 100 questions but rather a unique and complex technical exercise in timing, discretion, judgment, and inference. Its goal is to make a tentative comprehensive double diagnosis, the biomedical and psychosocial, by asking appropriate questions at the right time. It requires an attitude of careful listening and restraint in interviewing, intervening only when appropriate with an encouraging gesture of hand, an interested expression, or a reassuring word thus allowing the patient to tell his or her story with the physician's compliance. I use the word "restraint" advisedly because it was the poet Goethe who observed it was precisely "in the restraints the artist consents to accept, the artistic mastery reveals itself." So it is with the medical interview.[3,13,19] James B. Herrick (1865–1954) wrote, "The doctor may also learn more about the illness from the way the patient tells the story than from the story itself." Jacob Finesinger (1900–1959) suggested that "Minimal verbal activity when consciously used as a technical strategy by the physician evokes the maximal verbal activity on the part of the patient."[20] Wilford Trotter (1872–1936) wrote "Disease often tells its secrets in a casual parenthesis."

Many take for granted that they can rely solely on long-standing, previously successful, and naturally acquired social behavior and skills when taking a medical history. This frequently is not so. Many learn by their personal growth and education, and many learn by watching a trained or gifted physician's approach to a patient while on rounds. Done repeatedly, even short vignettes of this kind of learning experience (which is becoming less available in many medical schools and teaching hospitals) can lead to a changed attitude and an increased interviewing skill. In many instances the history may not be singularly decisive, but it will have delineated the diagnostic probabilities so that a more logical investigation may be pursued.

Medical Diagnosis

I would further respectfully suggest that "physical diagnosis" be subsumed under the more appropriate term "medical diagnosis" as a listing in the curriculum. The many chapters that usually follow the short one on history taking emphasize knowledge and skill required to do a physical examination and necessary for the disclosure of the physical-anatomic findings. There has been little mention of the doctor's ability to communicate empathy in taking a history even while doing a physical examination. Through minimal verbal behavior an attitude of interest, concern, and caring (touching the patient's body during the physical examination with skill, gentleness, and respect), a positive interaction may take place and a mutual bond of reassurance, trust, compliance, and confidence may be communicated between physician and patient.

This first meeting may set the tone for a maturing and enduring positive professional relationship between these two persons for the rest of their lives and to the advantage of both, fulfilling the complementarity of a need for care and a desire to give care.

In conclusion, I offer the following two quotations. The first, written by George Engel and published in *The Pharos* in 1973,[3] has to do with *skills* and *knowledge*:

> The interview, in my view, is the most powerful, sensitive and versatile instrument available to the physician. The interview serves many functions. Through it a relationship is initiated, the conditions and requirements for communication are established, roles and obligations are defined, the information necessary to delineate disease and to characterize the patient and his life circumstances are collected, data are processed, the patient and his family are prepared for decisions and judgements, are instructed in care and a human compact between patient and physician is achieved.

The second was in a speech given by Dr. Louis Kaplan, Chairman of the Board of Regents of the University of Maryland, on March 5, 1971, at the dedication of the Hayden-Harris Hall, Health Sciences Building, University of Maryland School of Dentistry and has to do with *feeling* and *attitude*.

> Within these stones and bricks, healing is to be administered, and no less important, human relationships developed between teachers and students and between students and patients. If ever patients are regarded as clinical material, this building will have been degraded and its use corrupted. We must never forget that the word patient comes from the Latin root which means to suffer. Clinical material does not suffer. Human beings do.[21]

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Executive Director's Newsletter

June 1987

MAAC UPDATE

Six months after the issuance of the Maximum Allowable Actual Charge (MAAC) by Medicare, there is still considerable concern among Med-Chi members regarding this federally mandated requirement. It is strongly recommended that physicians review their individual MAACs carefully. If any inconsistencies are identified, please highlight the data in question and forward a copy to Mrs. Charlotte Peterson, Coordinator, Medicare B Administrator at Maryland Blue Cross and Blue Shield, 700 E. Joppa Road, Towson, Maryland 21204. The Maryland Carrier has committed to a 72-hour turnover in responding to such inquiries. Substantiating data (copies of HCFA 1500 claims forms) may be submitted if considered necessary.

In Montgomery and Prince George's Counties, such inquiries should be directed to: Medicare - OBRA, P.O. Box 8817, 1800 Center Street, Camp Hill, PA 17011. The Faculty has been advised, however, that the Pennsylvania Carrier will issue recalculated MAACs effective June 22, 1987.

SPECIALIST IDENTIFICATION

In July 1987, the Board of Medical Examiners will begin notifying physicians that they may apply for identification as a specialist by completing an application and by providing information to demonstrate their qualifications as a medical specialist.

There will be two methods to become identified as a medical specialist: (1) specialty Board certification or (2) through evaluation of credentials by a medical review committee of the Faculty. This activity stems from Maryland law (14-704) that took effect July 1, 1985.

"CARING PROGRAM"

During its May 21 meeting, the Council approved the Infant, Child, and Adolescent Health Subcommittee's recommendation that Med-Chi join the Governor's Office and Blue Cross and Blue Shield as cosponsors of the "Caring Program."

The statewide program will provide primary health care coverage for "gray area" children (i.e., children under 18 years old whose families are ineligible for Medical Assistance, but whose incomes are below the Federal poverty level). It is estimated that 130,000 children in Maryland fall under this category.

Funding for the program will come from a newly created charitable foundation initiated by Blue Cross and Blue Shield of Maryland. Contributions will be solicited from industry, charities, church groups, etc. Actuarial projections indicate $178 per child per year will cover the costs of the program. Children will be enrolled only as the foundation acquires funds to guarantee coverage through age 18 for each child.

ROBERT WOOD JOHNSON GRANT

On May 13, 1987, Med-Chi was notified that the Robert Wood Johnson Foundation awarded the demonstration grant for physicians peer review to a joint project of Med-Chi, the Johns Hopkins University, the Commission on Medical Discipline, and the Maryland Hospital Association. The grant is approximately $280,000 of which about $75,000 will be related to Med-Chi's portion of the proposal.

IMPORTANT RULING ON MALPRACTICE ISSUE

On May 28, 1987, the Court of Appeals of Maryland issued an opinion in the case of Weimer v. Hetrick that reaffirmed the plaintiff's burden of proof in medical malpractice cases brought under Maryland's Wrongful Death Statute. The Faculty filed a brief as amicus curiae in the Weimer case (which concerned the death of a premature infant) challenging the lower court's ruling that the plaintiff need merely show that the physician's negligence deprived the child of a substantial possibility of survival. This ruling was a clear deviation from the long-standing burden of proof requiring the plaintiff to prove that the physician's negligence actually caused the infant to die.

The Court of Appeals agreed with the arguments presented by the appellants and the Faculty and overturned the lower court's ruling. This opinion reaffirms the plaintiff's burden to establish a clear causal connection between the physician's conduct and the alleged injury.

DRGs for RAPS

House Concurrent Resolution 30, opposing President Reagan's proposal to modify Medicare reimbursement mechanisms for inpatient services provided by hospital based radiologists, anesthesiologists, and pathologists (RAPs), is now being supported by more that half of the United States House of Delegates. Steny Hoyer (D), Prince George's County, District 5, is the only Maryland Delegate who has not signed as a co-sponsor. We urge you to call Steny Hoyer at 202-225-4131 and encourage him to support this most important resolution.

LICENSURE RENEWAL FEE

Effective July 1, 1987, there will be an increase in the biannual renewal fee for medical licensure in Maryland. On July 1, the Board of Medical Examiners will be sending formal notification of the increase to physicians with last names beginning with letters M-Z whose licenses expire as of September 30, 1987.

Angelo J. Troisi
Executive Director

MED-CHI TOLL-FREE WATS LINE
1-800-492-1056

* * * IMPORTANT * * *

MARYLAND LAW REGARDING NOTICE OF PARTICIPATION IN THE MEDICARE PROGRAM

On July 1, 1985 a law was passed in Maryland requiring physicians to post a notice in their offices regarding their participation status in the Medicare program. It has been brought to our attention that some physicians are not complying with this law. Therefore, Med-Chi has developed the signs on the next 3 pages for your use. The appropriate sign should be detached and posted in your office.

The law, which is outlined in Section 14-705 of the Health Occupations Article of the Annotated Code of Maryland, states:

> If a physician is engaged in the private practice of medicine in this State, the physician shall display a notice written in English that is plainly visible to patients in the office of the physician concerning whether the physician:
>
> (1) Is a participating physician under the Medicare program and, therefore, accepts assignment for all Medicare claims;
>
> (2) Accepts Medicare assignment on a case-by-case basis; or
>
> (3) Does not accept Medicare assignment in any case.
>
> This requirement DOES NOT apply to a physician or group of physicians who:
>
> (1) Have exclusive contracts with a health maintenance organization;
>
> (2) Treat only the patients of the health maintenance organization; and
>
> (3) Agree to accept full assignment for covered services rendered.
>
> A PERSON WHO VIOLATES ANY PROVISION OF THIS LAW IS GUILTY OF A MISDEMEANOR AND ON CONVICTION IS SUBJECT TO A FINE NOT TO EXCEED $5,000 OR IMPRISONMENT NOT EXCEEDING 5 YEARS OR BOTH.

If you have any questions about this matter, contact the Med-Chi Government Relations Department at 539-0872 or 1-800-492-1056.

For My Medicare Patients

I PARTICIPATE IN THE MEDICARE PROGRAM
AND
ACCEPT ASSIGNMENT FOR ALL MEDICARE CLAIMS

If you have any questions about my fees, please feel free to discuss them with me. As your physician, I am interested in your total health care.



_____
Physician's Signature

This sign was prepared by the Medical and Chirurgical Faculty of Maryland (The Maryland Medical Society) in accordance with Section 14-705(b) of the Health Occupations Article of the Annotated Code of Maryland.

For My Patients

I ACCEPT MEDICARE ASSIGNMENT ON A CASE-BY-CASE BASIS

If you have any questions about my fees, please feel free to discuss them with me. As your physician, I am interested in your total health care.



Physician's Signature

This sign was prepared by the Medical and Chirurgical Faculty of Maryland (The Maryland Medical Society) in accordance with Section 14-705(b) of the Health Occupations Article of the Annotated Code of Maryland.

For My Patients

I DO NOT ACCEPT MEDICARE ASSIGNMENT IN ANY CASE

If you have any questions about my fees, please feel free to discuss them with me. As your physician, I am interested in your total health care.

Physician's Signature

This sign was prepared by the Medical and Chirurgical Faculty of Maryland (The Maryland Medical Society) in accordance with Section 14-705(b) of the Health Occupations Article of the Annotated Code of Maryland.

Alzheimer Disease. Meridian Healthcare is helping to do something about it.

As the largest provider of long-term nursing care in Maryland, Meridian Healthcare is in a unique position to exercise some leadership in developing new techniques for caring for Alzheimer victims. Even more important, we have made a commitment to actively assist with the search for a cure for this serious, terminal condition.

A specialty Alzheimer Disease Care Unit has been created at Meridian Nursing Center—Heritage in consultation with The Johns Hopkins University Medical Institutions to develop innovative approaches to care. To advance this research, Meridian funds an Alzheimer Disease Research Fellowship in The Johns Hopkins University Department of Psychiatry.

Alzheimer Disease is a little understood, even frightening facet of aging about which more public information is needed. To address this need, Meridian Healthcare has produced a booklet on Alzheimer. This guide will be offered free in commercial radio broadcast advertising as part of Meridian's continuing public information campaign.

Our concern with Alzheimer Disease is only one of many ways Meridian Healthcare is different. For more detailed information on our Alzheimer program or on any of our 13 Nursing Centers in Maryland, call or send the coupon for our free *Referrer's Guide*.

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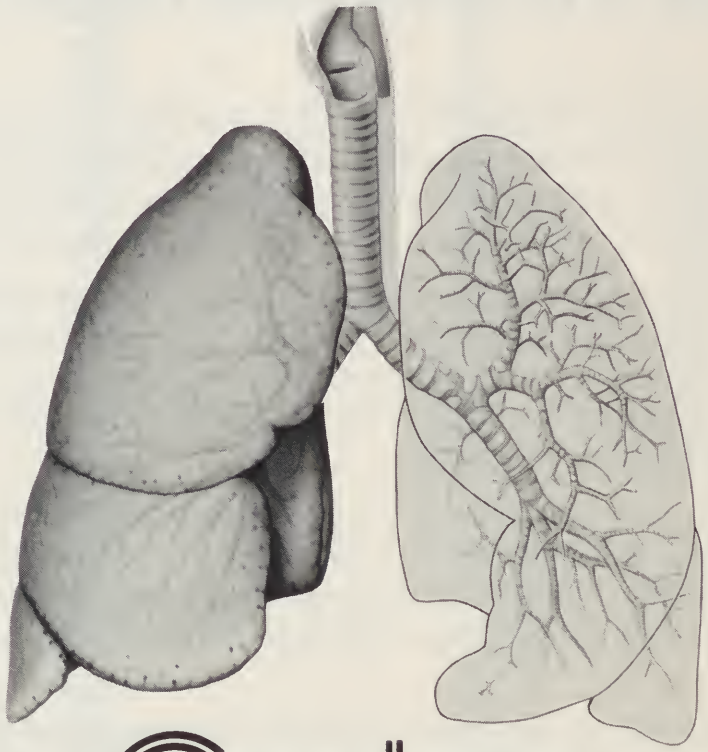
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Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

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CECLOR SHOULD BE AOMINISTEREO CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS. PENICILLINS AND CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY. POSSIBLE REACTIONS INCLUOE ANAPHYLAXIS.

Administer cautiously to allergic patients.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

Precautions:
- Discontinue Ceclor in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of nonsusceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients.

Adverse Reactions: (percentage of patients)

Therapy-related adverse reactions are uncommon. Those reported include:
- Gastrointestinal (mostly diarrhea): 2.5%.
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, and serum-sickness-like reactions that have included erythema multiforme [rarely, Stevens-Johnson syndrome] or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever): 1.5%; usually subside within a few days after cessation of therapy. Serum-sickness-like reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Ceclor. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.
- Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.
- As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
- Rarely, reversible hyperactivity, nervousness, insomnia, confusion, hypertonia, dizziness, and somnolence have been reported.
- Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1%; and, rarely, thrombocytopenia.

Abnormalities in laboratory results of uncertain etiology
- Slight elevations in hepatic enzymes.
- Transient fluctuations in leukocyte count (especially in infants and children).
- Abnormal urinalysis; elevations in BUN or serum creatinine.
- Positive direct Coombs' test.
- False-positive tests for urinary glucose with Benedict's or Fehling's solution and Clinitest® tablets but not with Tes-Tape® (glucose enzymatic test strip, Lilly).

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JUNE 1987

REPORTABLE COMMUNICABLE DISEASES IN MARYLAND IN 1987

The number of reportable communicable diseases that had onset in 1986 was summarized by counties in two tables published in the Maryland Medical Journal, May 1987. For some of the diseases of major public health importance, the figures for 1982 through 1985 were also included.

This report describes briefly the epidemiology of infectious diseases in Maryland, as they were reported from local health departments, hospitals, clinics, private physicians' offices and on some occasions, laboratories. In about half of the diseases and conditions, additional information was obtained from the active surveillance system maintained by the public health nurses in the local health departments and the nosocomial infection control practitioners in the hospitals.

AIDS (213)* - An increase of 26.7% over the 168 AIDS cases diagnosed in 1985 and 169.6% over the 79 cases diagnosed in 1984 was noted in 1986. Of the 213 cases, 72 (33.8%) had died by December 31, 1986. The total number of Maryland cases diagnosed from January 1981 to December 31, 1986 was 501, of whom 302 (60.2%) had died. Of these 501 cases, 459 (91.6%) were male. Homosexual and bisexual males comprised the largest transmission category group and accounted for 64.5% of the 501 cases. Other categories were represented by heterosexual intravenous (IV) drug users accounting for 13.6%; homosexual or bisexual IV drug users, 4.2%; blood transfusion recipients, 6.0%; heterosexual contacts of persons with AIDS or at risk of developing AIDS, 2.8%; hemophiliacs, 0.8%; immigrants from countries where AIDS is transmitted primarily through heterosexual contacts, 1.8%; and children born to HIV-infected mothers, 1.2%. The remaining 26 cases (5.2%) were not included in the above groups--some of them died before investigation and others are currently being investigated.

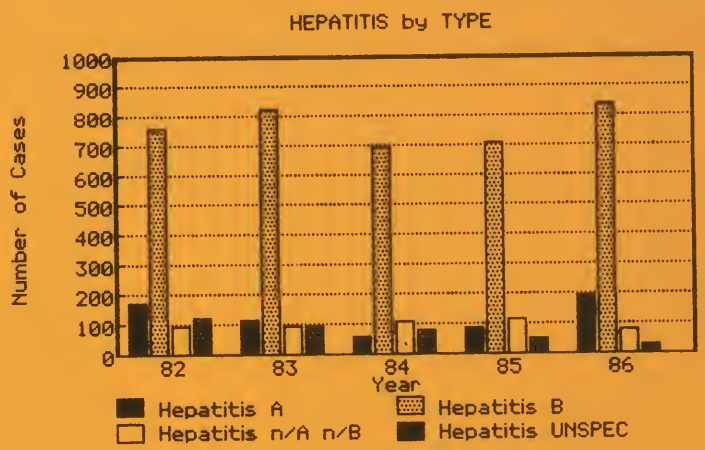
ENCEPHALITIS, VIRAL (34) - An equal number of males and females were affected, with ages ranging from 3 months to 84 years; 10 patients (29.4%) were 20 - 40 years of age. Forty-four percent had onset in July (9 cases) and September (6 cases). Five died, two of Herpes zoster infection. The etiological agent was identified in 8 (23.5%) of the cases. These included Herpes simplex (2), varicella-zoster virus (4), enterovirus (1) and influenza virus type A (1) isolated from a nasal swab. There were no suspected arboviral cases.

*The figure in brackets following the name of the disease, indicates the total reported cases with onset date in 1986.

GONORRHEA (28,287) - The State of Maryland, excluding Baltimore City, reported a 4.7% decrease in civilian gonorrhea for 1986 over 1985. There was an 11.0% decrease in cases reported from the public health sector and an increase of almost 2% from the private health sector. Male and female gonorrhea cases declined by almost the same percentage. Continuation of prevention messages for high risk groups and utilization by public and private medical providers of intervention counseling and recommended therapies are expected to aid in a further decline.

HEPATITIS, VIRAL - Both hepatitis A and hepatitis B were most prevalent among males, 25 to 29 years of age.

Of 285 patients with hepatitis B, interviewed for drug usage, 92 (28.8%) admitted to having had self-administered illegal drugs by injection during the six month prior to onset.In 1981, 24.1 admitted to I.V. drug abuse.



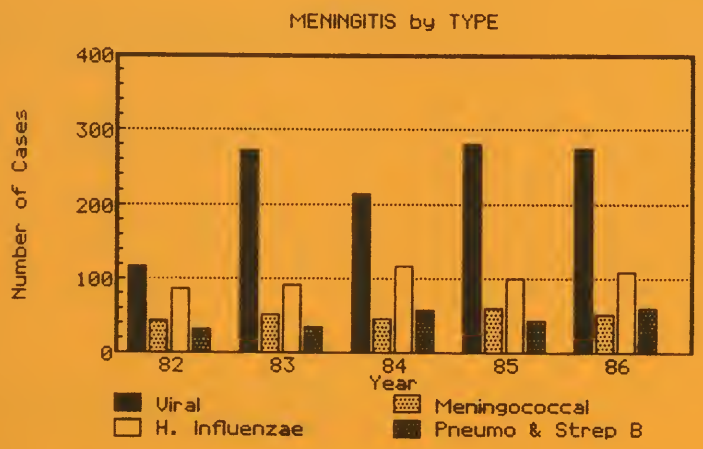
LYME DISEASE (15)- This spirochetal (Borrelia burgdorferi), tickborne-illness, is not a reportable disease in Maryland; nevertheless, all cases that are formally and informally reported are being investigated. Since 1979, when the first case was identified, a total of 62 cases have been confirmed, thus placing Maryland among 20 other states with endemic Lyme disease. Cases occured in the spring, summer and early fall and were mostly among children and young adults (age range between 2 and 77 years). About half of the patients report having being exposed to ticks, with or without a bite. Three to 30 days after tick exposure, a characteristic rash, erythema chronicum migrans (ECM), develops in 75% of the cases that may be followed by cardiac, neurological or arthritic signs. Avoiding tick bites is the best way of preventing the disease. Early diagnosis and treatment with penicillin for children and pregnant women and tetracycline for adults is necessary to prevent serious and sometimes prolonged sequelae. Laboratory confirmation is by acute and convalescent sera or culture of ECM biopsy or other involved body fluids.

MALARIA (17) - The decline of reported cases from the previous two years continued into 1986. Ten of the patients were exposed in Africa, 2 in India, 2 in Central America and the Caribbean; 1 was an Indochinese refugee that had spent several years in the Philippines; 2 had incomplete exposure history. The most prevalent malaria species were Plasmodium vivax (5) and P. falciparum (4). Most of the cases were young adults (between 20 and 40 years of age).

MEASLES (35) - Of the total cases, 29% were college students, 43% were either high school or elementary school students and 28% were preschool children. The median age of all cases was 16 years. Thirty-three (85%) had a history of vaccination. Three cases were hospitalized as a result of their illness.

MENINGOCOCCAL INFECTIONS (52) - A decrease in the incidence rate from 1.6 in 1985 to 1.4 cases per 100,000 population in 1986 was noted. Two age groups were at a much greater risk of acquiring Neisseria meningitidis infections - 1 year olds and less (34.6% of all cases) and 10-19 (26.9%). There were no patients younger than 1 month of age. By kind, the infections were distributed as follows: 13

meningococcemia, 2 acute pharyngitis (one occurred after rape of a 15 year old girl), one conjunctivitis and the rest were meningitis. The male:female ratio was 0.8:1. The diagnosis of the 36 meningitis cases was confirmed by CSF culture in 34 and a blood culture alone in 2 cases. There were 15 serotype B, 8 serotype C, one serotype Y infections, and the rest were not done or unknown. Three fatalities were noted - a 17 year old white male, a 58 and a 60 year old white females. Almost half of the illnesses (48.1%) were observed during the first quarter of the year followed by an additionaL 25% during the second quarter.



MYCOBACTERIOSIS, ATYPICAL (125) - This disease increased in 1986 although the absolute incidence rates are imprecise. Laboratory data indicate greater morbidity than reported by physicians. Some of this reporting lapse can be attributed to the extreme confidentiality offered to AIDS patients among whom atypical mycobacterial infections, Mycobacterium avium in particular, occur more often than in the general population, and some to unfamiliarity with the disease and/or treatment regimens. The State of Maryland has an abundance of water and soil conducive to the growth of atypical mycobacteria. The assumption is that morbidity and mortality from these organisms will continue to increase.

PERTUSSIS (166) - Thirty-eight of the reported cases were confirmed either by culture or direct fluorescent antibody test (DFA). Of these cases, 27 were caused by Bordetella pertussis and 11 by B. parapertussis. During the last two years, there was a significant increase in the number of B. parapertussis infections seen in Maryland. It has been noted that B. parapertussis illness appears to be less severe than that caused by B. pertussis. In addition, simultaneous occurrences of both B. pertussis and B. parapertussis organisms in the same household or day care center were observed. The reported number of Bordetella cases increased sharply during the last two years, which is attributed to the aggressive case finding, part of an active pertussis surveillance conducted by the Maryland State Health Department in collaboration with the Centers for Disease Control (CDC) during the period of July 1984 to July 1986.

RABIES (683) - Wild animals, predominantly raccoons, continued to be the most important potential source of rabies. More than 85% (586) of the laboratory confirmed animal rabies were among raccoons, 3.6% (25) were foxes and 1.8 (2) skunks. Owned and stray cats accounted for 2.6% of all cases and sometimes resulted in exposure of entire families.

Because the majority of bites in humans resulting in rabies postexposure treatment is provoked by the victim, avoiding wildlife and stray dogs and especially cats is important. When the animals are not avoided, prompt evaluation of suspected exposures and treatment is essential.

Since this wildlife epizootic began in 1981, 3,583 cases of animal rabies have been recorded. Wildlife rabies will continue to be present in Maryland for many years at a lower level than the initial extremely high numbers recorded following introduction into local areas. There has been no human deaths to date in this epizootic.

ROCKY MOUNTAIN SPOTTED FEVER (29) - No change in the reported incidence (0.6 cases per 100,000 population) from the previous 2 years was noted. All cases had onset of symptoms in April through September, mainly in May (7), June (9) and July (8). Forty-one percent were 4 to 14 years of age and 28% were between 20 and 34 years old, predominantly white males. The male/female ratio was 2.6. Twenty individuals had a tick bite or tick attachment within 14 days of onset and 4 had been in a known tick-infested area. The exposure of 5 patients remained unknown. The diagnosis was confirmed serologically by the IFA technique in 15 of the cases. All patients recovered from their illness.

SALMONELLOSIS (1642) - The overall incidence rate has steadily risen in the past 5 years from 28.4 cases per 100,000 population in 1982 to 37.1. There were 17 outbreaks reported in 1986. While 35.3% of all cases were not specified, the 6 most common serotypes were Salmonella enteritidis (32.1%), S. typhimurium (29.3%), S. heidelberg (15.6%), S. infantis (6.6%), S. newport (3.6%)and S. agona (1.6%).

SHIGELLOSIS (233) - Excluding 33 cases with unknown serotype, the rest (200) were distributed as follows: Shigella sonnei - 72%, Sh. flexneri - 25%, Sh. boydii - 2% and Sh. dysenteriae - 1%.

SYPHILIS (448) - Primary and secondary syphilis declined by 10.8% in 1986 over 1985. A 21% decrease was noted among the cases reported by private physicians and only 4.2% - in cases from public health clinics. There was an almost 20% decline in males as compared with a 10% increase among females.

TUBERCULOSIS (362) - Maryland experienced a 13 percent decline in tuberculosis incidence in 1986 following several years of an almost static case rate. Of particular note was the decrease in tuberculosis in children under six years of age. Most of this decline can be attributed to the treatment of tuberculosis in refugees in overseas' camps prior to immigration and the three year cumulative effects of directly supervised therapy for non-compliant patients. Although approximately 30 percent of the patients with tuberculosis disease are currently receiving directly supervised therapy, surveillance and contact follow-up activities must be vigorously pursued. The increase in tuberculosis morbidity related to drug resistant organisms and tuberculosis concommitant with AIDS is markedly increased from this same time period last year.

TYPHOID FEVER (16) - Nine of the cases were part of a foodborne outbreak (very rare in the United States) at a fast-food restaurant. The epidemiologic investigation revealed as the source of infection an asymptomatic carrier of S. typhi, orginally from India, that was a food handler and prepared shrimp salad. This person had a positive stool culture and high level of Vi antibodies (79 µg/ml). The investigation of this outbreak demonstrated the value of quantitative determination of Vi antibodies for rapid identification of asymptomatic carriers. The rest of the cases, excluding two with exposure at a bacteriological laboratory, were imported from Africa (Senegal, Nigeria)(2), India (2) and Korea (1).



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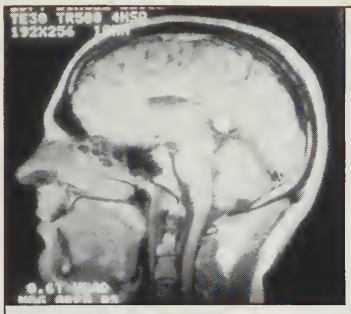
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Emergency CT of the Head: Indications and Utilization

CARLTON C. SEXTON MD and CAROL CAPLES RT

Computed tomography (CT) has proved to be an extraordinarily effective diagnostic tool in the emergency evaluation of the acutely neurologically impaired patient. However, in the present cost-conscious environment, we must refine the indications for its use to optimize the yield of such technology.[1–5]

Dr. Sexton and Ms. Caples are with the Department of Radiology, The Union Memorial Hospital, Baltimore. **Reprints:** Carlton C. Sexton MD, Dept. of Radiology, The Union Memorial Hospital, 201 East University Parkway, Baltimore, MD 21218.

To understand utilization of the CT scanner in the emergency evaluation of the head, we studied 100 consecutive emergency scans. We report the indications, findings, and treatment implications for these patients; from these data we can recommend refinements in utilization.

Materials and Methods

Between January 30 and May 24, 1986, 100 patients underwent emergency CT head scans at Union Memorial Hospital. They were scanned outside normal working hours, that is, on weeknights from 8:00 p.m. to 7:30 a.m. and on weekends from 8:00 p.m. Friday to 7:30 a.m. Monday. Scans were obtained on a Pfizer 0450 CT scanner generally without intravenous contrast but with contrast at the discretion of the radiologist. All scans were monitored by a radiologist at the time of the study. Subsequently the reports were reviewed along with hospital records of the involved patients. Indications for the scans were divided into broad categories according to the perceived primary event responsible for the request of a scan. Scans were reported as positive only if there were definite acute findings such as acute intracerebral hemorrhage, mass effect, or an acute or chronic extraaxial fluid collection. Evidence of old infarction or atrophy was not recorded in this study.

Results

One hundred consecutive emergency CT head scans over 16 weeks average over six scans per week with 2.8 scans per week between 8 p.m. and 8 a.m., and the remaining 3.5 scans per week from 8 a.m. to 8 p.m. on Saturdays and Sundays. Sixty-four percent of the patients came directly from the Emergency Room. The average age was 60.5 years with a range of 9 months to 92 years. The indications and results are reported in Table 1.

The most frequent indication for an emergency CT head scan was a focal neurologic deficit, nontraumatic in origin, "stroke, rule out hemorrhage." This represented 35 percent of requests, and a "positive acutely relevant" finding was present in 23 percent. Recent trauma was the second most frequent indication, in 29 percent of the emergency scans, and a positive finding was present in 24 percent of these patients. The less common, but important, minority of indications included change in mental status, seizure, and headache. In these three categories combined, only 1 of 36 patients (2.8 percent) had an acutely relevant positive finding, an intracerebral abscess in a patient who presented as a seizure. The overall positive rate for the 100 consecutive patients was 16 percent.

A further evaluation of several parameters in the clinical course of patients with positive scans is reviewed in Table 2, concentrating on the higher yield groups of trauma and nontraumatic focal neurologic deficit. In no case, whether an acute parenchymal hemorrhage, mass effect, or acute or chronic extraaxial fluid collection, was neurosurgery subsequently indicated. Of these patients with positive scans, 60 percent were admitted or returned to a nonintensive care unit hospital floor, and 53 percent had no follow-up CT scan. Four subsequently died.

Table 1. Results of 100 Consecutive Emergency Head CT Scans

Primary Indication	Trauma	Focal Neuro Deficit (Nontrauma)	Change in Mental Status	Seizure	Headache
Number of patients	29	35	20	9	7
Acute parenchymal hemorrhage	4	4	0	0	0
Mass effect only	2	2	0	1	0
Extraaxial fluid collection	3[a]	3[b]	0	0	0
Positive (Positive total 16%)	24%	23%	0	11%	0

a. Two of the three also counted among four with parenchymal hemorrhage.
b. One of the three also counted among four with parenchymal hemorrhage.

Table 2. Outcome of Positive Scans

	Trauma	Focal Neuro Deficit (Nontrauma)	Total	Neuro Surgery	Admit to Floor	Follow-up CT	Deceased
Acute parenchymal hemorrhage	4	4	8	none	3/8	5	3
Mass effect only	2	2	4	none	4[a]/4	1	0
Extraaxial fluid collection	3	3	6	none	3[b]/6	2	4
Total					9/15[c]	7/15	4

a. One of the four was transferred to another hospital for treatment of neoplasm.
b. One of the three was transferred to another hospital non-ICU and subsequently released without surgery.
c. Three patients are counted in two categories above.

Realizing that a "normal scan" in the patient with acute neurological impairment is diagnostically relevant, we analyzed the hospital records of the 27 patients presenting with a focal neurologic deficit (nontraumatic) with an acutely "negative" scan. More than half the patients were scanned during the day on Saturday or Sunday and represent a combination of emergency and semielective scans, while 15 percent were scanned after midnight and were, therefore, considered high priority emergencies. Seventy percent of this group were heparinized.

Discussion

This analysis supports what physicians, nurses, and technologists who work in the emergency setting already know and indicates areas where the triage and therapy processes can be improved. Emergency CT head scans represent the majority of emergency imaging procedures for which an on-call technologist and radiologist must be available and high-priced technology used. An average of 29 hours per week of technologist overtime salary substantiates this.

The high cost in manpower and machinery is worthwhile when diagnosis is urgent and therapy pivots on information only obtained by CT. The use of this technology, however, is less justified for a population of patients in whom the yield is very low, and for whom therapy does not change regardless of the information provided by the scan.

In the patient population studied, a positive yield varied markedly with the indication for the scan. The indications of change in mental status without focal neurological deficit, seizure alone, or headache alone, were extraordinarily low yield (2.8 percent). High yields (23 to 24 percent) were obtained when the indication was recent trauma or focal neurological deficit in a nontraumatic setting. Other similar investigations have found a higher yield of acutely abnormal CTs in both the traumatized and nontraumatized emergency patient.[1,4] The optimal yield (all significant acute lesions are diagnosed and none missed) is difficult to quantify. When a triage becomes strict enough to raise the yield near 100 percent, acute lesions will be missed in some few patients excluded in the triage process.

While the diagnosis of an acute intracerebral hemorrhage, cerebral edema, or an extraaxial fluid collection must be important, it is noteworthy that in none of the 15 patients with such lesions was there need for neurological intervention, and 60 percent of these 15 patients were returned to a nonintensive care setting following the scan. This is not to understate the severity of their illness but rather to underscore the limited therapeutic options. By contrast, a similar study by Mills *et al.* reports "immediate further intervention" indicated in 22 percent of 398 patients undergoing emergency head CT; they do not define further intervention.

The value of a "negative" scan in the setting of the transient ischemic attack or stroke is confirmed in that 70 percent of such patients were begun on heparin anticoagulation. For the substantial minority who weren't, however, the decision that a therapeutic choice does not pivot on the result of an emergency scan could be made prior to the scan and the scan postponed to regular hours.

Observations and Recommendations

1. CT scanning of the head is a vital part of the evaluation of a subset of the acutely neurologically impaired patient.

2. Low yield indications include a change in mental status alone, a seizure alone, or headache alone and are usually insufficient reason for an emergency head CT.

3. A therapeutic decision should pivot on the information that can be obtained only by a CT scan. That is, if the patient is not an operative candidate, the documentation of intracranial hemorrhage may be less urgent. Similarly, if the patient is not a candidate for

anticoagulation, documenting lack of intracranial hemorrhage may not be urgent.

4. When triage is careful and when the information provided by an emergency CT head scan provides unique information on which decisions are made and therapy expeditiously instituted, emergency head CT, carefully performed, is certainly indicated.

Acknowledgment

We acknowledge the assistance of the CT Technology Staff, Florence Sandler and Carol D. Mars, Department of Quality Assurance.

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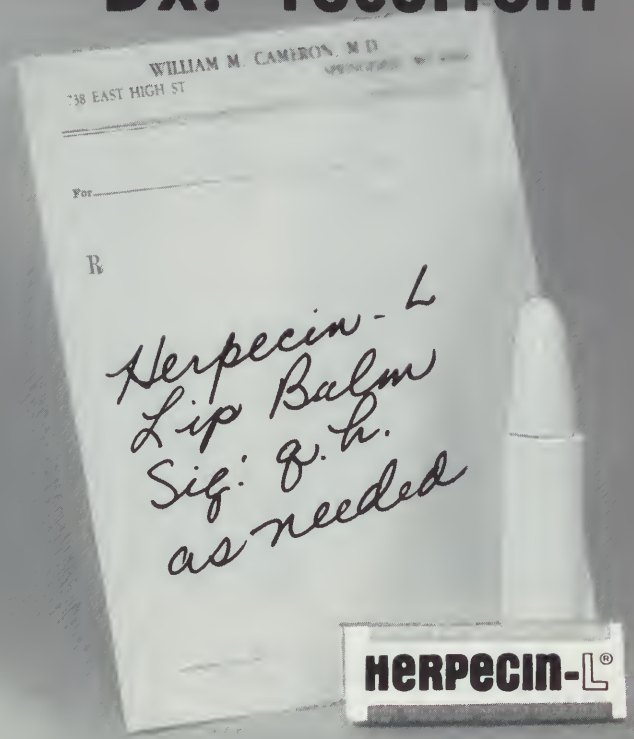
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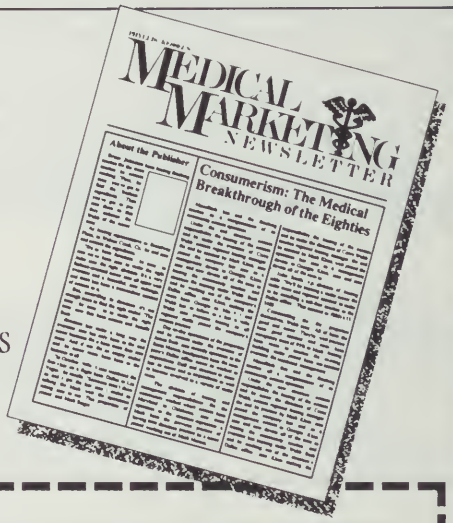
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Commentary

Emergency CT of the Head: More Questions

ROBERT J. ROTHSTEIN MD

Dr. Rothstein is Chairman, Department of Emergency Medicine, Suburban Hospital, Bethesda.

The preceding article by Sexton and Caples is both timely and relevant in this age of conflicting goals of cost containment and "high tech" medical care overshadowed by the specter of malpractice litigation.

However, I have concerns regarding the study's design. Since there were no prospective criteria assigned, we are looking at 100 CT scans, not 100 consecutive patients. Were some patients screened out by clinical evaluation? We have no knowledge of such, and thus, we have no control group. The authors' definition of "emergency" CT head scans varies from the standard definition of scans done on acute CNS illness or injury, whether performed on Emergency Room or in-house patients. We must, therefore, regard the term "emergency" cautiously.

The authors imply that lack of subsequent neurosurgery, admission to an intensive care unit, or follow-up scans negates the original need for the emergent scan. In fact, the CT scan is the test of choice for accurately defining the operative neurosurgical lesion. Ambrose *et al.*[1] showed a 94 percent reduction in craniotomies after the advent of CT scanning. The lack of surgery in this study group simply may reflect the relative paucity of operative lesions in this setting, or it may represent good clinical judgment on the part of the ordering physician.

The cost implications of admitting a patient to an intensive care unit for the weekend for observation rather than emergently scanning the patient make it obvious that the CT scan can be a very cost-effective tool. That 53 percent of patients had no follow-up scan is not surprising because negative scans or those of stable lesions do not necessarily require repeat study.

That the CT scan is not justified for the population in which the yield is low is irrefutable; however defining that population is not simple and is not done in the present study. The Department of Health and Human Services has published a useful management strategy for radiographic imaging in head trauma,[2] which suggests that low-risk patients do not while moderate and high-risk patients do require CT scanning. No such well-defined indications exist for the nontrauma patient. The study by Mills *et al.*[3] attempted to define high-yield indications using preestablished entry criteria for CT scanning on an emergency basis. High-yield criteria produced between 21 to 46 percent positive scans while low-yield criteria (altered mental status and "other") were positive in only 7 percent and 8 percent, respectively. Is 7 to 8 percent an acceptably low yield? I think not.

As the authors point out, when triage becomes too strict, lesions are missed. We are willing to sacrifice specificity for sensitivity in this setting, but are we capable of making a decision that a lesion on CT will not change management before we see what that lesion is? For example, not all patients who present to the Emergency Room with a headache need a CT scan, but the one with "the worst headache of my life," even without focal neurologic findings, warrants the test. Can the clinician differentiate the sliver of subarachnoid blood from the operative lesion without benefit of CT scan? Moreover, today's technology and medicolegal climate mandate a CT scan before lumbar puncture in this and many other settings.

While this study does not answer all the questions and may raise even more than it answers, it does speak to a serious issue. The hospital, Radiology Department, Emergency Room, and all other concerned groups must evaluate local resources and define the value of the CT scan. In particular, does the number of scans justify the expense of coverage by full-time technicians? Cost considerations must include not only revenue and expenses related to the CT scan itself but also the benefit to the community, the savings in discharging patients with normal scans, the savings in admitting patients to a ward rather than an ICU, the malpractice risk reduction, and the overall quality of care delivered to the patients presenting to the institution.

Radiologists and clinicians should consider developing local guidelines, fashioned after the HHS recommendations, to be used for ordering "emergency" CT scans. Finally, this issue must be reevaluated frequently to assure that utilization is consistent with quality of care.

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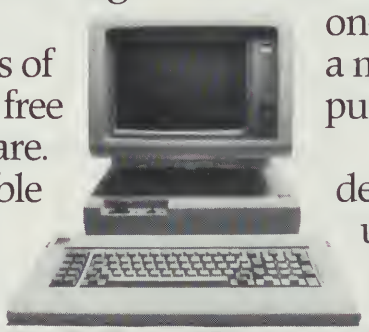
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CARDIZEM® diltiazem HCl/Marion

FEW SIDE EFFECTS IN ANTIANGINAL THERAPY

60 mg tid or qid

Brief Summary
Professional Use Information

CARDIZEM®
(diltiazem HCl) 30 mg and 60 mg Tablets

CONTRAINDICATIONS

CARDIZEM is contraindicated in (1) patients with sick sinus syndrome except in the presence of a functioning ventricular pacemaker, (2) patients with second- or third-degree AV block except in the presence of a functioning ventricular pacemaker, and (3) patients with hypotension (less than 90 mm Hg systolic).

WARNINGS

1. ***Cardiac Conduction.*** *CARDIZEM prolongs AV node refractory periods without significantly prolonging sinus node recovery time, except in patients with sick sinus syndrome. This effect may rarely result in abnormally slow heart rates (particularly in patients with sick sinus syndrome) or second- or third-degree AV block (six of 1,243 patients for 0.48%). Concomitant use of diltiazem with beta-blockers or digitalis may result in additive effects on cardiac conduction. A patient with Prinzmetal's angina developed periods of asystole (2 to 5 seconds) after a single dose of 60 mg of diltiazem.*
2. ***Congestive Heart Failure.*** *Although diltiazem has a negative inotropic effect in isolated animal tissue preparations, hemodynamic studies in humans with normal ventricular function have not shown a reduction in cardiac index nor consistent negative effects on contractility (dp/dt).*
   Experience with the use of CARDIZEM alone or in combination with beta-blockers in patients with impaired ventricular function is very limited. Caution should be exercised when using the drug in such patients.
3. ***Hypotension.*** *Decreases in blood pressure associated with CARDIZEM therapy may occasionally result in symptomatic hypotension.*
4. ***Acute Hepatic Injury.*** *In rare instances, significant elevations in enzymes such as alkaline phosphatase, CPK, LDH, SGOT, SGPT, and other symptoms consistent with acute hepatic injury have been noted. These reactions have been reversible upon discontinuation of drug therapy. The relationship to CARDIZEM is uncertain in most cases, but probable in some. (See PRECAUTIONS.)*

PRECAUTIONS

General. *CARDIZEM (diltiazem hydrochloride) is extensively metabolized by the liver and excreted by the kidneys and in bile. As with any new drug given over prolonged periods, laboratory parameters should be monitored at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic function. In subacute and chronic dog and rat studies designed to produce toxicity, high doses of diltiazem were associated with hepatic damage. In special subacute hepatic studies, oral doses of 125 mg/kg and higher in rats were associated with histological changes in the liver which were reversible when the drug was discontinued. In dogs, doses of 20 mg/kg were also associated with hepatic changes; however, these changes were reversible with continued dosing.*

Drug Interaction. *Pharmacologic studies indicate that there may be additive effects in prolonging AV conduction when using beta-blockers or digitalis concomitantly with CARDIZEM. (See WARNINGS.)*

Controlled and uncontrolled domestic studies suggest that concomitant use of CARDIZEM and beta-blockers or digitalis is usually well tolerated. Available data are not sufficient, however, to predict the effects of concomitant treatment, particularly in patients with left ventricular dysfunction or cardiac conduction abnormalities. In healthy volunteers, diltiazem has been shown to increase serum digoxin levels up to 20%.

Carcinogenesis, Mutagenesis, Impairment of Fertility. *A 24-month study in rats and a 21-month study in mice showed no evidence of carcinogenicity. There was also no mutagenic response in in vitro bacterial tests. No intrinsic effect on fertility was observed in rats.*

Pregnancy. *Category C. Reproduction studies have been conducted in mice, rats, and rabbits. Administration of doses ranging from five to ten times greater (on a mg/kg basis) than the daily recommended therapeutic dose has resulted in embryo and fetal lethality. These doses, in some studies, have been reported to cause skeletal abnormalities. In the perinatal/postnatal studies, there was some reduction in early individual pup weights and survival rates. There was an increased incidence of stillbirths at doses of 20 times the human dose or greater.*

There are no well-controlled studies in pregnant women; therefore, use CARDIZEM in pregnant women only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. *Diltiazem is excreted in human milk. One report suggests that concentrations in breast milk may approximate serum levels. If use of CARDIZEM is deemed essential, an alternative method of infant feeding should be instituted.*

Pediatric Use. *Safety and effectiveness in children have not been established.*

ADVERSE REACTIONS

Serious adverse reactions have been rare in studies carried out to date, but it should be recognized that patients with impaired ventricular function and cardiac conduction abnormalities have usually been excluded.

In domestic placebo-controlled trials, the incidence of adverse reactions reported during CARDIZEM therapy was not greater than that reported during placebo therapy.

The following represent occurrences observed in clinical studies which can be at least reasonably associated with the pharmacology of calcium influx inhibition. In many cases, the relationship to CARDIZEM has not been established. The most common occurrences as well as their frequency of presentation are: edema (2.4%), headache (2.1%), nausea (1.9%), dizziness (1.5%), rash (1.3%), asthenia (1.2%). In addition, the following events were reported infrequently (less than 1%):

Cardiovascular:	*Angina, arrhythmia, AV block (first degree), AV block (second or third degree — see conduction warning), bradycardia, congestive heart failure, flushing, hypotension, palpitations, syncope.*
Nervous System:	*Amnesia, gait abnormality, hallucinations, insomnia, nervousness, paresthesia, personality change, somnolence, tinnitus, tremor.*
Gastrointestinal:	*Anorexia, constipation, diarrhea, dysgeusia, dyspepsia, mild elevations of alkaline phosphatase, SGOT, SGPT, and LDH (see hepatic warnings), vomiting, weight increase.*
Dermatologic:	*Petechiae, pruritus, photosensitivity, urticaria.*
Other:	*Amblyopia, dyspnea, epistaxis, eye irritation, hyperglycemia, nasal congestion, nocturia, osteoarticular pain, polyuria, sexual difficulties.*

The following postmarketing events have been reported infrequently in patients receiving CARDIZEM: alopecia, gingival hyperplasia, erythema multiforme, and leukopenia. However, a definitive cause and effect between these events and CARDIZEM therapy is yet to be established. *Issued 7/86*

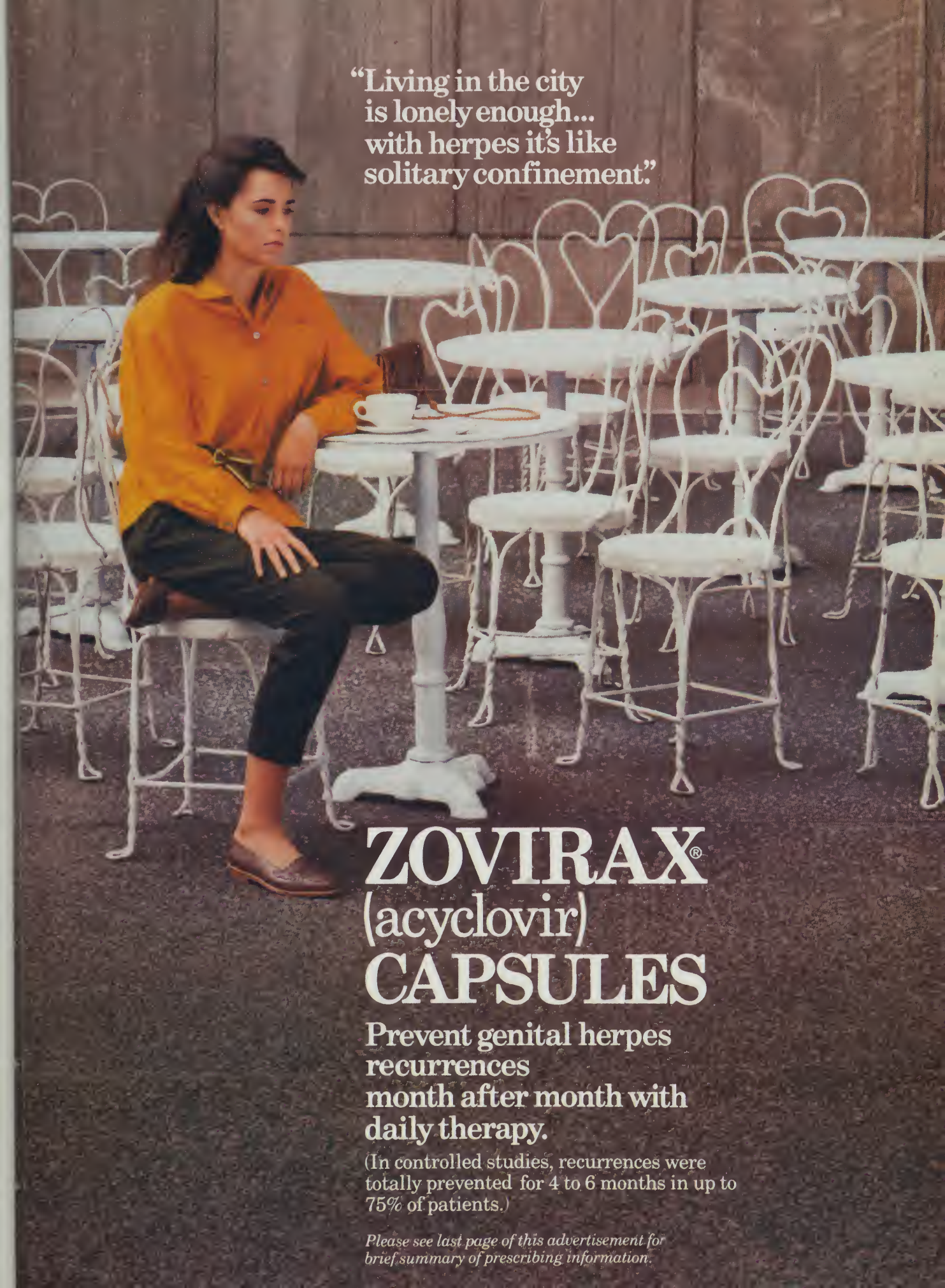
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References: ***1.*** *Pepine CJ, Feldman RL, Hill JA, et al: Clinical outcome after treatment of rest angina with calcium blockers: Comparative experience during the initial year of therapy with diltiazem, nifedipine, and verapamil. Am Heart J 1983; 106(6):1341-1347.* ***2.*** *Shapiro W: Calcium channel blockers: Actions on the heart and uses in ischemic heart disease. Consultant 1984;24(Dec):150-159.* ***3.*** *Johnston DL, Lesaway R, Human DP, et al: Clinical and hemodynamic evaluation of propranolol in combination with verapamil, nifedipine and diltiazem in exertional angina pectoris: A placebo-controlled, double-blind, randomized, crossover study. Am J Cardiol 1985;55:680-687.* ***4.*** *Cohn PF, Braunwald E: Chronic ischemic heart disease, in Braunwald E (ed): Heart Disease: A Textbook of Cardiovascular Medicine, ed 2. Philadelphia, WB Saunders Co, 1984, chap 39.* ***5.*** *Schroeder JS: Calcium and beta blockers in ischemic heart disease: When to use which. Mod Med 1982;50(Sept):94-116.*

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with herpes it's like
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ZOVIRAX®
(acyclovir)
CAPSULES
Prevent genital herpes
recurrences
month after month with
daily therapy.
(In controlled studies, recurrences were totally prevented for 4 to 6 months in up to 75% of patients.)
Please see last page of this advertisement for brief summary of prescribing information.

ZOVIRAX® (acyclovir) CAPSULES

Help free your patients from recurrences.

Daily therapy

Coping with genital herpes is rarely easy. For some, the worst part is the pain and discomfort of frequent attacks—month after month, year after year. For others, the emotional burden presents a more difficult problem, leading to social isolation, anxiety, and diminished self-esteem.

Prevent or reduce recurrences

Although your patients have to live with herpes, they shouldn't have to suffer. Daily therapy with ZOVIRAX CAPSULES can help free them from the cycle of recurrent genital herpes. For many, one capsule three times a day can suppress recurrences completely while on therapy.

Generally well tolerated

Daily therapy with ZOVIRAX CAPSULES is generally well tolerated. The most frequent adverse reactions reported during clinical trials were headache, diarrhea, nausea, vomiting, vertigo, and arthralgia.

The physical and emotional difficulties posed by genital herpes are unique for each patient. The frequency and severity of recurrent episodes, as well as the emotional impact of the disease, should be considered when selecting daily therapy with ZOVIRAX CAPSULES.

Please see brief summary of prescribing information on next page



Prevent recurrences month after month*

ZOVIRAX® (acyclovir) CAPSULES

Brief Summary

INDICATIONS AND USAGE: Zovirax Capsules are indicated for the treatment of initial episodes and the management of recurrent episodes of genital herpes in certain patients.

The severity of disease is variable depending upon the immune status of the patient, the frequency and duration of episodes, and the degree of cutaneous or systemic involvement. These factors should determine patient management, which may include symptomatic support and counseling only, or the institution of specific therapy. The physical, emotional and psychosocial difficulties posed by herpes infections as well as the degree of debilitation, particularly in immunocompromised patients, are unique for each patient, and the physician should determine therapeutic alternatives based on his or her understanding of the individual patient's needs. Thus Zovirax Capsules are not appropriate in treating all genital herpes infections. The following guidelines may be useful in weighing the benefit/risk considerations in specific disease categories:

First Episodes (primary and nonprimary infections — commonly known as initial genital herpes):

Double-blind, placebo-controlled studies have demonstrated that orally administered Zovirax significantly reduced the duration of acute infection (detection of virus in lesions by tissue culture) and lesion healing. The duration of pain and new lesion formation was decreased in some patient groups. The promptness of initiation of therapy and/or the patient's prior exposure to Herpes simplex virus may influence the degree of benefit from therapy. Patients with mild disease may derive less benefit than those with more severe episodes. In patients with extremely severe episodes, in which prostration, central nervous system involvement, urinary retention or inability to take oral medication require hospitalization and more aggressive management, therapy may be best initiated with intravenous Zovirax.

Recurrent Episodes:

Double-blind, placebo-controlled studies in patients with frequent recurrences (6 or more episodes per year) have shown that Zovirax Capsules given for 4 to 6 months prevented or reduced the frequency and/or severity of recurrences in greater than 95% of patients. Clinical recurrences were prevented in 40 to 75% of patients. Some patients experienced increased severity of the first episode following cessation of therapy; the severity of subsequent episodes and the effect on the natural history of the disease are still under study.

The safety and efficacy of orally administered acyclovir in the suppression of frequent episodes of genital herpes have been established only for up to 6 months. Chronic suppressive therapy is most appropriate when, in the judgement of the physician, the benefits of such a regimen outweigh known or potential adverse effects. In general, Zovirax Capsules should not be used for the suppression of recurrent disease in mildly affected patients. Unanswered questions concerning the human relevance of *in vitro* mutagenicity studies and reproductive toxicity studies in animals given very high doses of acyclovir for short periods (see Carcinogenesis, Mutagenesis, Impairment of Fertility) should be borne in mind when designing long-term management for individual patients. Discussion of these issues with patients will provide them the opportunity to weigh the potential for toxicity against the severity of their disease. Thus, this regimen should be considered only for appropriate patients and only for six months until the results of ongoing studies allow a more precise evaluation of the benefit/risk assessment of prolonged therapy.

Limited studies have shown that there are certain patients for whom intermittent short-term treatment of recurrent episodes is effective. This approach may be more appropriate than a suppressive regimen in patients with infrequent recurrences.

Immunocompromised patients with recurrent herpes infections can be treated with either intermittent or chronic suppressive therapy. Clinically significant resistance, although rare, is more likely to be seen with prolonged or repeated therapy in severely immunocompromised patients with active lesions.

CONTRAINDICATIONS: Zovirax Capsules are contraindicated for patients who develop hypersensitivity or intolerance to the components of the formulation.

WARNINGS: Zovirax Capsules are intended for oral ingestion only.

PRECAUTIONS: General: Zovirax has caused decreased spermatogenesis at high doses in some animals and mutagenesis in some acute studies at high concentrations of drug (see PRECAUTIONS — Carcinogenesis, Mutagenesis, Impairment of Fertility). The recommended dosage and length of treatment should not be exceeded (see DOSAGE AND ADMINISTRATION).

Exposure of Herpes simplex isolates to acyclovir *in vitro* can lead to the emergence of less sensitive viruses. The possibility of the appearance of less sensitive viruses in man must be borne in mind when treating patients. The relationship between the *in vitro* sensitivity of Herpes simplex virus to acyclovir and clinical response to therapy has yet to be established.

Because of the possibility that less sensitive virus may be selected in patients who are receiving acyclovir, all patients should be advised to take particular care to avoid potential transmission of virus if active lesions are present while they are on therapy. In severely immunocompromised patients, the physician should be aware that prolonged or repeated courses of acyclovir may result in selection of resistant viruses which may not fully respond to continued acyclovir therapy.

Drug Interactions: Co-administration of probenecid with intravenous acyclovir has been shown to increase the mean half-life and the area under the concentration-time curve. Urinary excretion and renal clearance were correspondingly reduced.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Acyclovir was tested in lifetime bioassays in rats and mice at single daily doses of 50, 150 and 450 mg/kg given by gavage. There was no statistically significant difference in the incidence of tumors between treated and control animals, nor did acyclovir shorten the latency of tumors. In 2 *in vitro* cell transformation assays, used to provide preliminary assessment of potential oncogenicity in advance of these more definitive life-time bioassays in rodents, conflicting results were obtained. Acyclovir was positive at the highest dose used in one system and the resulting morphologically transformed cells formed tumors when inoculated into immunosuppressed, syngeneic, weanling mice. Acyclovir was negative in another transformation system considered less sensitive.

In acute studies, there was an increase, not statistically significant, in the incidence of chromosomal damage at maximum tolerated parenteral doses of 100 mg/kg acyclovir in rats but not Chinese hamsters; higher doses of 500 and 1000 mg/kg were clastogenic in Chinese hamsters. In addition, no activity was found after 5 days dosing in a dominant lethal study in mice. In 6 of 11 microbial and mammalian cell assays, no evidence of mutagenicity was observed. At 3 loci in a Chinese hamster ovary cell line, the results were inconclusive. In 2 mammalian cell assays (human lymphocytes and L5178Y mouse lymphoma cells *in vitro*), positive responses for mutagenicity and chromosomal damage occurred, but only at concentrations at least 400 times the acyclovir plasma levels achieved in man.

Acyclovir has not been shown to impair fertility or reproduction in mice (450 mg/kg/day, p.o.) or in rats (25 mg/kg/day, s.c.). At 50 mg/kg/day s.c. in the rat, there was a statistically significant increase in post-implantation loss, but no concomitant decrease in litter size. In female rabbits treated subcutaneously with acyclovir subsequent to mating, there was a statistically significant decrease in implantation efficiency but no concomitant decrease in litter size at a dose of 50 mg/kg/day. No effect upon implantation efficiency was observed when the same dose was administered intravenously. In a rat peri- and postnatal study at 50 mg/kg/day s.c., there was a statistically significant decrease in the group mean numbers of corpora lutea, total implantation sites and live fetuses in the F_1 generation. Although not statistically significant, there was also a dose related decrease in group mean numbers of live fetuses and implantation sites at 12.5 mg/kg/day and 25 mg/kg/day, s.c. The intravenous administration of 100 mg/kg/day, a dose known to cause obstructive nephropathy in rabbits, caused a significant increase in fetal resorptions and a corresponding decrease in litter size. However, at a maximum tolerated intravenous dose of 50 mg/kg/day in rabbits, there were no drug-related reproductive effects.

Intraperitoneal doses of 320 or 80 mg/kg/day acyclovir given to rats for 1 and 6 months, respectively, caused testicular atrophy. Testicular atrophy was persistent through the 4-week post-dose recovery phase after 320 mg/kg/day; some evidence of recovery of sperm production was evident 30 days postdose. Intravenous doses of 100 and 200 mg/kg/day acyclovir given to dogs for 31 days caused aspermatogenesis. Testicles were normal in dogs given 50 mg/kg/day, i.v. for one month.

Pregnancy: ***Teratogenic Effects:*** Pregnancy Category C. Acyclovir was not teratogenic in the mouse (450 mg/kg/day, p.o.), rat (50 mg/kg/day, s.c.) or rabbit (50 mg/kg/day, s.c. and i.v.). There are no adequate and well-controlled studies in pregnant women. Acyclovir should not be used during pregnancy unless the potential benefit justifies the potential risk to the fetus. Although acyclovir was not teratogenic in animal studies,. the drug's potential for causing chromosome breaks at high concentration should be taken into consideration in making this determination.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when Zovirax is administered to a nursing woman. In nursing mothers, consideration should be given to not using acyclovir treatment or discontinuing breastfeeding.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS — Short-Term Administration: The most frequent adverse reactions reported during clinical trials were nausea and/or vomiting in 8 of 298 patient treatments (2.7%) and headache in 2 of 298 (0.6%). Less frequent adverse reactions, each of which occurred in 1 of 298 patient treatments (0.3%), included diarrhea, dizziness, anorexia, fatigue, edema, skin rash, leg pain, inguinal adenopathy, medication taste and sore throat.

Long-Term Administration: The most frequent adverse reactions reported in studies of daily therapy for 3 to 6 months were headache in 33 of 251 patients (13.1%), diarrhea in 22 of 251 (8.8%), nausea and/or vomiting in 20 of 251 (8.0%), vertigo in 9 of 251 (3.6%), and arthralgia in 9 of 251 (3.6%). Less frequent adverse reactions, each of which occurred in less than 3% of the 251 patients (see number of patients in parentheses), included skin rash (7), insomnia (4), fatigue (7), fever (4), palpitations (1), sore throat (2), superficial thrombophlebitis (1), muscle cramps (2), pars planitis (1), menstrual abnormality (4), acne (3), lymphadenopathy (2), irritability (1), accelerated hair loss (1), and depression (1).

DOSAGE AND ADMINISTRATION: Treatment of initial genital herpes: One 200 mg capsule every 4 hours, while awake, for a total of 5 capsules daily for 10 days (total 50 capsules).

Chronic suppressive therapy for recurrent disease: One 200 mg capsule 3 times daily for up to 6 months. Some patients may require more drug, up to one 200 mg capsule 5 times daily for up to 6 months.

Intermittent Therapy: One 200 mg capsule every 4 hours, while awake, for a total of 5 capsules daily for 5 days (total 25 capsules). Therapy should be initiated at the earliest sign or symptom (prodrome) of recurrence.

Patients With Acute or Chronic Renal Impairment: One 200 mg capsule every 12 hours is recommended for patients with creatinine clearance ≤10 ml/min/1.73/m².

HOW SUPPLIED: Zovirax Capsules (blue, opaque) containing 200 mg acyclovir and printed with "Wellcome ZOVIRAX 200"- Bottles of 100 (NDC-0081-0991-55) and unit dose pack of 100 (NDC-0081-0991-56).

Store at 15°-30°C (59°-86°F) and protect from light.

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*In controlled studies, recurrences were totally prevented for 4 to 6 months in up to 75% of patients.

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Stroke Rehabilitation Outcomes at Montebello Hospital

R. GARG MD, N. SANTANELLO MD, I.I. KESSLER MD, J.P.G. FLYNN MD, M. MALOOF MSN, and L. REICH MS

At any given time there are two million survivors of stroke in the United States who need effective rehabilitation to improve their capacity for activities of daily living. We examined the characteristics of stroke patients referred to Montebello Rehabilitation Hospital and evaluated predictors of successful rehabilitation outcomes. Based on the Barthel Index scores, about 75 percent of the patients demonstrated improvement in their daily activities during hospitalization. While there are no predictors sufficiently valid for prognosticating about individual patients' rehabilitation, it is apparent that stroke patients, regardless of their initial functional status, may benefit from intensive rehabilitation efforts in the acute care setting.

All authors are with the Department of Epidemiology and Preventive Medicine, University of Maryland School of Medicine, Baltimore. Dr. Flynn and Maloof are also affiliated with Montebello Rehabilitation Hospital, Baltimore. This study was made possible by resident funds from both institutions.

There are more than two million disabled survivors of stroke in the United States; approximately 500,000 new cases occur each year.[1] Over a ten-year period one family in ten can expect to have a member affected by stroke.[2] Sixty percent of all new stroke cases survive more than six months and about 30 percent survive longer than eleven years.[3] The relatively high prevalence of stroke survivors stresses the need for effective rehabilitation programs to reduce their dependence, to improve their function and to return them to the community.

Comprehensive rehabilitation programs following stroke are generally accepted as benefiting the patients. Rehabilitation can be defined as the maximum restoration of an individual's physical, social, and vocational capabilities following the cerebrovascular event. Goals of rehabilitation should include preventing avoidable complications, increasing personal capabilities, and adapting environmental conditions for the patient.[2]

Montebello Rehabilitation Hospital is a 153-bed comprehensive rehabilitation facility that is part of the University of Maryland Medical System. It offers several specialty programs, designed to meet the rehabilitation needs of a variety of patients. Approximately 25 percent of all admissions to Montebello are for stroke rehabilitation, constituting the greatest proportion of diagnoses admitted to Montebello.

Stroke rehabilitation is managed by a coordinated team effort. Under direction of a physician, the team includes a physical therapist, occupational therapists, rehabilitation nurse, social worker, dietitian, speech pathologist, and psychologist. Other specialists may be included as required by the individual patient.

We examined the demographic characteristics of stroke patients referred to the Montebello Rehabilitation Hospital to determine which factors on admission to rehabilitation were useful predictors of successful outcome.

Materials and Methods

Data was abstracted from the charts of 182 Montebello patients for the period between July 1, 1984 and June 30, 1985. Patients were eligible for study if they had received a primary diagnosis of cerebrovascular accident (ICD codes 430, 432, 433, 434, 436, 437, 438) and were discharged from Montebello during the study period. Several of the patients were discharged and readmitted during this period.

A coding form was designed to secure information on demographics, sources of admission, personal health habits, type of cerebrovascular accident, medical complications, neurological deficits, activities of daily living (ADL), and placement at the time of discharge. Specific medical complications of interest included hypertension, diabetes mellitus, bowel and bladder incontinence, cardiovascular diseases, infections, and diagnosed psychiatric depression.

The Barthel Index (BI) was the measurement tool used to evaluate functional ability of the patients.[4] This is based on the patient's ability to perform 10 ADL. The BI score for each patient was determined by a member of the rehabilitation team at intervals during the patient's hospitalization and at the time of discharge. A patient can score between 1 to 100, the higher score indicating less impairment. A BI score of 100 suggests the patient is independent for ADL but does not necessarily imply he or she is capable of living alone. The capacity of patients to be completely independent can be assessed by the Instrumental Activities of Daily Living, which measures the ability to perform such activities as shopping, cooking, self-transportation, housecleaning, and using the telephone. We were unable to evaluate patients for the Instrumental ADL.

In the present study, a successful outcome was being discharged to home with a minimum BI score of 60. Granger *et al.*[5] found this score pivotal in determining the patient's independence in the basic skills of daily living. The latter is based on the patient's ability to perform six major ADL with minimal dependency:

- bowel and bladder continence
- feeding

- personal toilet care
- getting on and off toilet
- propel wheelchair
- transfer from wheelchair to bed

After coding and verification, the data were analyzed using Statistical Analysis Systems (SAS). The *t*-test was used for comparison of means of BI across the various subgroups of patients. Multiple linear and logistic regressions were used to determine predictive factors for the outcome variables of length of stay (LOS), discharge BI, and disposition.

Results

Stroke patients were referred for rehabilitation primarily from Baltimore City (70.9 percent) with the remainder coming from 10 other Maryland counties and Pennsylvania. Most patients (89.9 percent) were transferred from an acute care facility. Of these, 29 percent came from University of Maryland Hospital, 20 percent from Johns Hopkins Hospital, 8 percent from Baltimore County General Hospital, 7 percent from Union Memorial Hospital, and the remainder from 19 other Maryland hospitals.

Among the 182 charts reviewed, the stroke rehabilitation patients were fairly evenly distributed between males and females (52.7 percent *vs.* 47.3 percent) respectively. The racial profile indicated a higher proportion of blacks (55.5 percent blacks, 44.0 percent whites, and 0.5 percent others), and the age at entry into rehabilitation averaged 58.8 years (SD = 15.2), with a range between 21 and 85 years. The distribution of the patient population by sex, race, and age is shown in Table 1.

Patient characteristics such as socioeconomic status, marital status, and primary source of payment were examined as possible determinants of length of stay (LOS) or disposition. Among 180 patients for whom educational status was known, 62.2 percent had less than twelve years of formal education. As to employment, 45 percent of the patients were retired, 28.3 percent unemployed, and 26.7 percent gainfully employed. A large proportion of the "unemployed" patients were homemakers. The majority of the patients had Medicare or Medicaid as their primary source of payment (66.9 percent), with Blue Cross accounting for 24.6 percent and other private insurance and government aid accounting for the remaining 8.5 percent. Distribution of marital status revealed that 45 percent were married, 21.1 percent were widowed, 15 percent were single, 12.2 percent were separated, and 6.7 percent were divorced. While marital status did not differ significantly by race, it was found that males were more likely to be married than females (52.1 percent males *vs.* 36.5 percent females).

The distribution of stroke type by race, sex, and age, is given in Tables 2 and 3. Sixty-five percent suffered thromboembolic strokes, 25 percent hemorrhagic strokes, and 10 percent were of unknown type or secondary to multiple sclerosis. Hemorrhagic strokes were more frequent among patients less than 70 years old. Notably, hemorrhagic strokes accounted for 40 percent of strokes among black males. Thromboembolic strokes were fairly evenly distributed by race and sex but tended to increase with age.

Table 1. Distribution of Stroke Patients by Sex, Race, and Age (N = 177*)

Age Group (years)	Males				Females			
	White		Black		White		Black	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)
<50	8	(22)	16	(29)	7	(17)	11	(25)
51–70	19	(53)	26	(47)	26	(62)	21	(48)
>70	9	(25)	13	(24)	9	(21)	12	(27)
Total	36	(100)	55	(100)	42	(100)	44	(100)

* Excludes one male patient of other race and four patients for whom age was unknown.

Table 2. Distribution of Hemorrhagic Stroke Patients by Sex, Race, and Age (N = 44)

Age Group (years)	Males				Females			
	White		Black		White		Black	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)
<50	5	(55)	9	(45)	2	(25)	3	(43)
51–70	4	(45)	10	(50)	6	(75)	3	(43)
>70	0	(0)	1	(05)	0	(0)	1	(14)
Total	9	(100)	20	(100)	8	(100)	7	(100)

Table 3. Distribution of Thromboembolic Stroke Patients by Sex, Race and Age (N = 114)

Age Group (years)	Males				Females			
	White		Black		White		Black	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)
<50	1	(4)	7	(23)	5	(17)	3	(10)
51–70	15	(60)	12	(40)	18	(60)	17	(59)
>70	9	(36)	11	(37)	7	(23)	9	(31)
Total	25	(100)	30	(100)	30	(100)	29	(100)

Among patients on whom smoking history was available, 42.8 percent were nonsmokers, 41.5 percent current smokers, and 15.7 percent ex-smokers. For the 158 patients for whom a history of alcohol use was known, 24.7 percent had a positive history of alcohol abuse. Of those patients with a hemorrhagic stroke 46.2 percent had a positive history of alcohol abuse as compared with only 17.5 percent among patients with a thromboembolic stroke.

A history of medical complications at the time of admission and during the Montebello hospitalization was abstracted to assess rehabilitation potential. The five major complications include

- hypertension = 74 percent
- bowel/bladder incontinence = 40 percent
- history of previous strokes = 30 percent
- cardiovascular diseases = 30 percent
- diabetes mellitus = 25 percent

During rehabilitation, 20 percent of the stroke population was diagnosed by psychiatric consultation as having depression. Eighty percent of the patients had three or more complications. White females as a group were found to have a greater number of medical complications on admission as compared to the rest of the study population. Eighty-eight percent of white females had greater than three complications as compared to 78.3 percent of white males, 81.8 percent of black males, and 72.7 percent of black females.

Among the study population, 165 patients had both an admission BI and a discharge BI recorded. The average admission BI score for the patients was 37.9 points (SD = 25.1) and the average discharge BI was 57.6 points (SD = 30.5), indicating an average improvement of 19.7 points. Approximately 75 percent of the stroke patients showed an improvement in their individual BIs ranging from 5 to 95 points. Twenty-one percent of the patients showed no improvement, while only 4 percent regressed in functional ability during their rehabilitation period.

The admission BI was classified arbitrarily into three categories to characterize the patients by their functional ability when they entered Montebello Hospital. Patients with an admission BI score of 0 to 20 were considered totally dependent on others in the performance of their ADL. Those scoring between 21 and 60 varied in their need for assistance but, in general, were considered to require assistance in one or more aspects of their ADL.

Patients scoring more than 60 on the admission BI were regarded as independent in their ability to perform at least the six major ADL tasks. It was observed that a smaller proportion of white females had admission BI scores greater than 60 points as compared to black females and all male patients (Figure 1).

As previously stated, a discharge BI score of greater than 60 was deemed an indicator of the successful performance of ADL because such patients could function independently with minimal assistance from others. Fifty-eight percent of patients with a known discharge BI scored at least 60 points (Figure 2). As with their admission BI scores, white females as a group performed more poorly on the discharge BI than did other patient subgroups: 48 percent scored at least 60 on the discharge BI, as compared to 56 percent white males, 59 percent of black males, and 67 percent of black females.

Mean admission BI and discharge BI were compared across the four race/sex categories of patients. Again, white females had lower mean admission and discharge BI than both black females and black males. They had a lower mean discharge BI than the white male group. These differences were not statistically significant as measured by the *t*-test.

Of patients admitted with a BI score of less than twenty points, 20 percent were discharged with a score of at least 60. This compared to 69 percent for patients

Figure 1. Admission Barthel Index (BI) by Race, Sex, and Age (N = 173)

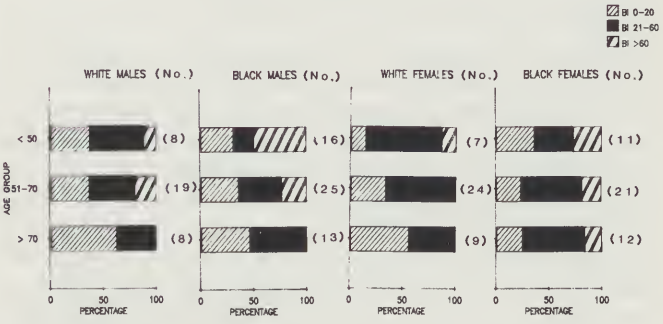
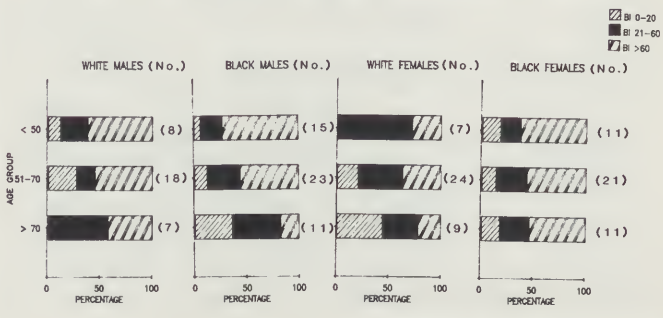


Figure 2. Discharge Barthel Index (BI) by Race, Sex, and Age (N = 165)



with an admission BI of 21 to 60. All stroke patients scoring greater than 60 points on the admission BI were discharged with a score at least as high.

Length of stay (LOS) was examined as an outcome variable. The average LOS was 85 days (SD = 85.2), with a range of 2 to 834 days. LOS for the total study population revealed that 83 percent of the patients were hospitalized for more than 30 days, 54.5 percent for more than 60 days and 30.7 percent for more than 90 days. White female patients tended to be hospitalized for more than 90 days, disproportionally longer than other stroke patients (34 percent *vs.* 20 percent for white males, 25 percent for black males and 21 percent for black females).

LOS was examined in relation to the admission BI (Table 4). The LOS was not significantly decreased except when the BI score was higher than 60. Seventy-nine percent of patients with an admission BI greater than 60 had a length of stay at Montebello of less than or equal to 60 days.

Multiple linear regression was employed to assess the effect of selected factors on LOS. Age, sex, race, marital status, smoking, alcohol use, stroke diagnosis, admission BI, number of medical complications on admission, and education were included in the regression model. Admission BI and sex were found to be the only statistically significant predictors of length of stay (admission BI, $p = 0.059$, and sex, $p = 0.02$).

A systematic review of patients' discharge plans revealed that 65 percent were discharged to home, 10 percent to a skilled nursing facility, 10 percent to an acute care facility, 6 percent to an intermediate care facility, and 3 percent died. Discharge to home was more likely in the younger patient population. About 80 percent of the patients less than 50 years old were discharged to home. Of patients in the 51 to 70 age category, 67 percent were discharged to home, and for patients over 70, 49 percent went home. Level of education and marital status of the patients did not appear to influence their disposition. Patients admitted with multiple medical complications were less likely to be discharged to home. Eighty-three percent of patients with two or less medical complications were discharged to home, while 61 percent of patients with three or more complications were discharged to home.

Figure 3 shows disposition by sex, race, and age groups. As seen in the figure 64 percent of white males, 71 percent of black males, 52 percent of white females, and 73 percent of black females were discharged to home. Patients were more likely to be discharged to home if their admission BI was greater than 60 points. Ninety percent of such patients were discharged to home, compared with 70 percent of those with an admission BI between 21 to 60, and 53 percent of patients with a score less than 21 points.

A logistic regression examined variables associated with a successful outcome, that is, discharge to home with BI of at least 60. The variables studied were age, sex, race, marital status, educational level, number of complications on admission, admission BI, tobacco use, stroke diagnosis, alcohol consumption, and LOS. Only admission BI was associated with a successful outcome at a statistically significant level ($p < .0001$).

Discussion

While most physicians are aware of the diagnosis and acute management of stroke, relatively few are familiar with the treatment of residual disabilities. Studies have demonstrated that stroke patients with residual disabilities may benefit from intensive therapy.[2,3,6–13]

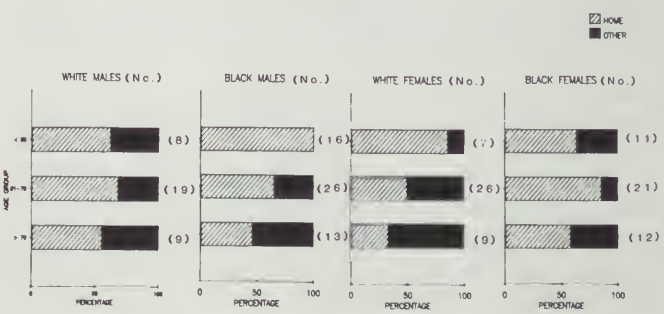
Our study focused on patients admitted for inpatient rehabilitation who were evaluated by a standard tool (Barthel Index) to assess functional capacity. In general, the patients showed a marked improvement in activities of daily living during the rehabilitation process. However, the white females as a group experienced least degree of improvement. Relatively more of them had lower BIs on admission and discharge, longer stays,

Table 4. Admission Barthel Index vs. Length of Stay* (N = 173)

Admission Barthel Index	Length of Stay						
	<60 days		61–90 days		>90 days		
	No.	(%)	No.	(%)	No.	(%)	Total
0–20	22	(37.3)	14	(23.7)	23	(39.0)	59
21–60	30	(35.3)	26	(30.6)	29	(34.1)	85
61–100	23	(79.3)	4	(13.8)	2	(6.9)	29

* Excludes four patients who died.

Figure 3. Disposition by Race, Sex, and Age (N = 177)



and were less likely to be discharged back to the community.

We are unable to fully explain the basis for the poor rehabilitation achieved by the white females, although a major contributing factor may have been the increased number of medical complications among them.

Family support systems were examined through a determination of marital status. It was found that male patients, both white and black, were more likely to have a spouse at home than were female patients. Although there was no difference in marital status between white and black females, the latter were more likely to benefit from an extended family support system and therefore, more likely to be discharged to home. Additional data, presently unavailable, on social support systems would be required to determine whether this was the reason white females were less likely to be discharged to home.

Age was not a statistically significant determinant of either lengths of stay or successful rehabilitative outcome. Patients in the oldest age group were able to benefit from rehabilitative therapy. Among the oldest patients in the study, only 4.7 percent had an admission BI of at least 60 points, but 35 percent were able to achieve a discharge BI of 60 points or above prior to their discharge home. These findings are similar to those of Adler *et al.*[6] who, using a functional scale similar to the BI, found that none of the oldest patients scored 60 points or greater on admission, but that 29 percent did so at discharge and were returned to their homes. Studies by Granger *et al.*[7] and Feigenson[9] have also suggested that age is not inversely related to clinical outcome in stroke rehabilitation.

Our study also revealed that the higher the admission BI, the more likely a patient was to be discharged home. This finding is supported by the study of Granger *et al.* at the New England Rehabilitation Hospital.[7] Our conclusion is that severity of the residual disability is of greater importance than age in predicting a patient's clinical disposition.

It was observed that a larger proportion of hemorrhagic stroke patients gave a positive history of alcohol abuse than patients with thromboembolic stroke. This finding is supported by a recent study of the Honolulu Heart Program, which noted the risk of hemorrhagic stroke to be nearly tripled for heavy drinkers.[14]

Numerous studies have examined such predictors of stroke outcome as age, socioeconomic status, medical complications, education, neurological deficits, and perceptual and cognitive dysfunction.[9–13] There appears to be a lack of consistency among the findings of these studies as to factors that are clinically useful in predicting outcome. Among the risk factors examined in the Montebello stroke patient population, only sex and admission BI were found to be statistically significant predictors of LOS and successful rehabilitative outcome, as defined by a BI of at least 60 points prior to discharge to home. Other variables such as age, marital status, stroke diagnosis, smoking history, alcohol abuse, and the number of medical complications may well be of clinical importance during rehabilitation, but they were not statistically significant predictors of LOS or ultimately successful outcome.

There do not appear to be definitive predictors of rehabilitation outcome sufficiently valid for prognosticating about individual patients. Until such predictors are identified, a physician should use all available information that may be of value in the rehabilitation of stroke patients and not delay in the referral of these patients to rehabilitative specialists. All stroke patients, regardless of their initial functional status, benefit to some extent from intensive rehabilitation initiated in the acute hospital setting and continued in either an inpatient or an outpatient rehabilitation facility.

Acknowledgment

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Left Dominant Coronary Anatomy: Prognostic Considerations

JAMES H. BIDDISON MD, MAHMOOD ALIKHAN MD, and CONSTANTINE TSERETOPOULOS MD

Left dominant coronary anatomy has been described as a variable associated with increased operative risk relative to right dominant circulation in the presence of left main coronary artery disease. It has been shown to be related to isolated right ventricular infarction and angina in the presence of high-grade obstruction of the short right coronary artery. Little else has been documented regarding increased risk of morbidity or mortality for this congenital variation.

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The terms "left dominant coronary anatomy" and "right nondominant coronary anatomy" are synonymous. The definition of the left *vs.* right dominance depends on which artery crosses the crux cordis to continue distally as the posterior descending coronary artery.[1] The left coronary artery is the significant artery in humans, giving rise to the greatest number of ramifications to the thickest part of the left ventricular wall and to the interventricular septum.

A right dominant system is present in approximately 80 percent of the population.[1] The right coronary artery (RCA) supplies the major portion of the posterior and diaphragmatic area of the septum and in most instances supplies the diaphragmatic aspect of the left ventricle through its left ventricular branch.

Left dominant coronary anatomy is a congenital variation present in about 14 percent of the population.[1] In this variant the left ventricle and septum are perfused almost entirely by the left coronary artery alone. The RCA usually ends with the acute marginal branch that supplies the diaphragmatic and inferior right ventricular myocardium and, occasionally, the posterior apical interventricular septum.

In reviewing the clinical presentation of a nonselect group of patients with coronary artery disease, we were impressed with the complex course of an index case of left dominant coronary anatomy associated with left coronary artery atherosclerosis. We thereafter attempted to identify the clinical characteristics of patients with similar coronary anatomy and to ascertain their prognosis.

Materials and Methods

During the years 1981 to 1984 a total of 2,473 patients were admitted to the coronary care unit with the diagnosis of unstable angina pectoris and/or acute myocardial infarction (MI). An index case of complicated MI with left dominant coronary anatomy was identified. Ten additional cases of left dominant coronary anatomy were found by coronary arteriography in patients undergoing evaluation for early onset myocardial ischemia and followed for an average of 24 to 48 months (see Appendix).

All 11 patients had resting electrocardiograms (ECGs) on admission and serial creatine kinase determinations including isoenzymes, exercise stress tests using standard Bruce protocol, and coronary arteriography. The patients ranged in age from 37 to 68 years. Eight were male; three were female. ECGs showed evidence of inferior MI in four cases and anterior MI in two cases. Two had inferior ischemic ST-T changes; two had anterior wall ischemic changes. Three had normal electrocardiograms. Exercise testing showed a positive ST segment ischemic response in all cases, with five having early ischemia within five minutes of Bruce protocol.

Coronary arteriography showed left dominant coronary anatomy in all cases, with the left anterior descending (LAD) coronary artery normal in two cases. Significant left anterior descending stenoses >70 percent were present in five cases, with three having 100 percent occlusion. The left circumflex coronary artery (LCX) was normal in seven cases. Significant left circumflex stenoses were present in four cases, two having 100 percent occlusion. In one case a 50 percent stenosis of the nondominant RCA was present with normal left coronary anatomy. Mitral valve prolapse was identified in two cases.

Six patients have been managed on medical therapy; one of these has had recurrent MI after four years of follow-up. Four have undergone coronary artery bypass grafting (CABG), and one has had percutaneous transluminal angioplasty. Of the surgically treated group three are asymptomatic; one has had recurrent angina. However, two have evidence of recurrent ischemia by exercise testing (see Table).

Index Case

Case 1 A 62-year-old female with a history of hypertension, heavy cigarette use, and borderline hypothyroidism presented with severe retrosternal tightness associated with pallor, diaphoresis, hypotension, and confusion. An electrocardiogram showed ST elevation in leads II, III, AVF, with precordial ST segment depression. Intermittent atrioventricular junctional escape rhythm was present. A Swan-Ganz catheter and temporary pacemaker were placed, and she was treated with pressors for hypotension and antiarrhythmics for

ventricular arrhythmia. Her blood pressure stabilized, and sinus rhythm was restored. Peak creatine kinase level was 2516. An exercise test performed three weeks following admission showed 1 mm ST depression stage I with associated exertional hypotension. There were no associated symptoms or arrhythmia.

Catheterization showed akinesis of the inferobasal left ventricular wall, with dyskinesis of the apex. Insignificant mitral regurgitation was present. Left ventricular ejection fraction was depressed at 47 percent. A 75 percent stenosis of the proximal LAD coronary artery prior to the first septal perforating branch was present. The LCX showed a 50 percent stenosis at its origin, with a more distal 50 percent stenosis. Left dominant coronary anatomy was present (Figures 1 and 2).

CABG was performed to the left anterior descending and second and third posterior descending arteries. The patient is angina free two years later.

Table. Left Dominant Coronary Anatomy

Case	Age	ECG	Exercise Test	Catheterization*	Prognosis
1	62	Q II, III, AVF; T ↓ V1–6	+ stage I V4–6	75% proximal LAD stenosis; 50, 70% LCX stenoses	three-vessel CABG
2	45	ST ↓ 2.5mm II, III, AVF	neg. stage IV	LAD, LCX normal mitral prolapse	inferior MI, AIVR
3	61	T ↓ V2–5 a Flutter 2:1	+ stage I, II, III, AVF, I, AVL	LAD 100% occlusion; LCX normal; RCA 50% mid stenosis	class II angina
4	68	ST ↓ II, III, AVF, V5–6	+ stage II V4–6	70% proximal LAD stenosis; 100% LCX	six-vessel CABG
5	50	ST ↓ II, III, AVF	+ stage I V3–5	100% occlusion LAD; 50% stenosis LCX; distal PDA disease	seven-vessel CABG
6	46	Q II, III, AVF; ST ↓ V4–6	+ stage I V5–6	50, 90% stenosis LAD; 80% LADD1; 100% LCX OM1	two-vessel CABG
7	61	Q III, AVF T flat V4–6	– ST change; 4 beat VT	70% proximal LAD stenosis; 50% LADD1; LCX normal	medical Rx
8	57	normal	+ stage II, II, III, AVF, V4–6	LAD, LCX normal; mitral prolapse	medical Rx
9	37	normal	+ ? stage	80% proximal LAD stenosis; LCX normal	PCTA
10	62	QSV1-5, T ↓ V3–6	+ stage II	100% proximal LAD occlusion; LCX normal	medical Rx; recurrent MI 4 years later
11	58	normal	+ stage II, III, AVF, V5–6	30% LAD stenoses ×2; LCX minimal irregularities	medical Rx

* = left prodominant coronary artery present in all cases
AIVR = accelerated idioventricular rhythm
CABG = coronary artery bypass graft
ECG = resting electrocardiogram
LAD = left anterior descending coronary artery
LCX = left circumflex coronary artery
MI = myocardial infarction
neg = negative
PDA = posterior descending coronary artery
RCA = right coronary artery
Rx = therapy

Discussion

The diversity of the case histories illustrates that the clinical presentations of left dominant coronary anatomy preclude its differentiation from right dominant coronary anatomy. However, on the basis of anatomical and clinical considerations, patients with left dominant coronary anatomy are at increased risk of ischemic events occurring in the right and inferior left ventricular myocardium, thus being more akin in clinical behavior to three-vessel coronary artery disease.

The areas of the myocardium whose circulation would be expected to be compromised in the presence of left dominant coronary anatomy plus significant LAD and LCX coronary disease are the posterior septal and diaphragmatic walls. Localization is tenuous based on nonspecific electrocardiographic changes; however, 9 of the 11 patients exhibited inferior ST abnormalities at rest or during exercise testing. Four had evidence of inferior wall abnormalities documented on ventriculography. Eight patients also exhibited lateral ST segment changes on electrocardiogram (Table).

Four patients developed inferior wall MIs, although atherosclerosis of the nondominant right coronary artery was documented in only one patient on subsequent arteriogram. Two patients had associated precordial ST segment depression on electrocardiogram. This is a marker for larger MI size in patients with RCA dominance,[2] multivessel coronary disease,[3] and for a more unfavorable prognosis compared with uncomplicated inferior MI without precordial ST segment changes.[4]

Atherosclerosis of the nondominant right coronary artery was documented in one case. Crosby *et al.*[5] previously reported a case of isolated right ventricular infarction in a patient with atherosclerosis of the nondominant right coronary artery and normal left coronary system. Thus the potential for coronary spasm, as well as MI exists with this unusual isolated anomaly.

Moyeyra *et al.*[6] recently reported a lower overall incidence of coronary obstructive disease in patients with left dominant coronary anatomy. The incidence of atherosclerosis in the nondominant RCA was also lower than in dominant RCAs but when present was associated with concomitant left coronary artery atherosclerosis. Gensini previously reported an increased incidence of LCX coronary lesions in patients with left dominant coronary anatomy.[2] By contrast 8 of our 11 patients showed significant LAD coronary lesions compared with four patients with significant LCX coronary lesions. More important, all patients with significant LCX coronary disease had concomitant LAD coronary disease, prompting surgical consideration. No correlation could be made between the presenting ECG findings and the distribution or extent of left coronary



Figure 1. The right coronary artery is diminutive, ending at the acute margin of the heart.



Figure 2. The left coronary artery is a dominant vessel supplying the posterior descending artery. Significant stenoses of the proximal LAD and mid LCX coronary arteries are identified by arrows.

artery lesions. We therefore conclude that distribution of left coronary artery atherosclerosis in patients with left dominant coronary anatomy cannot accurately be predicted clinically or electrocardiographically.

Other points of comment include the suggestion of a familial inheritance of left dominant coronary anatomy and of mitral valve prolapse. Because of small sample size no inference can be made regarding its incidence when compared with the general population.

Surgical Considerations

Criteria for selection of patients for CABG have become progressively stringent in the past ten years. No longer can one select patients with only three-vessel disease as the criterion without considering the presence of abnormal left ventricular function and/or the degree of clinical myocardial ischemia. An increasing number of patients with single-vessel disease and possibly multivessel disease may be treated successfully by coronary angioplasty. Historic factors continue to remain important: age, sex, prior MI, and coexisting disease states.

Consensus exists for CABG when a 70 percent stenosis of the left main coronary artery is identified.[7] Chaitman *et al.* demonstrated that patients with left main disease plus left dominant coronary anatomy had a higher operative mortality than those with right coronary dominance (12 percent *vs.* 4.2 percent), regardless of the number of other vessels involved.[8] Furthermore a higher degree of left main stenosis was required with a right coronary dominant system to create an equivalent extent of risk (90 percent *vs.* 50 to 70 percent for left dominant coronary anatomy).[9]

Left main equivalent disease has been defined as 70 percent or greater stenoses of both the proximal LAD and LCX arteries.[10] Babb *et al.* reported a significantly lower 4.2 month morbidity (3 percent) and mortality (0 percent) in 31 patients with left main equivalent lesions, contrasted with 15 percent mortality in 53 patients with significant left main coronary disease in the Veterans Administration Cooperative Study[10]; 80 percent also demonstrated significant RCA disease. However, 60 percent presented with progressive or unstable angina, and all acceptable candidates underwent CABG. The authors concluded that left main equivalent disease is a misnomer, and in the presence of RCA disease is equivalent to three-vessel disease in prognosis.

In our experience patients with left dominant coronary anatomy and significant LAD and LCX stenoses were subject to early ischemia and MI and hence equivalent to three-vessel disease in terms of prognosis. These patients underwent CABG. Patients with single left coronary stenoses plus left dominant coronary anatomy have been maintained on medical therapy, as well as those with atherosclerotic involvement of the nondominant RCA.

The incidence of postcoronary bypass angina with left dominant coronary anatomy is unknown. Of our four patients who had surgery, two have manifested recurrent myocardial ischemia by exercise testing, despite improvement in clinical classification; only one was symptomatic. Long-term follow-up is needed to determine postoperative morbidity in patients with left dominant coronary anatomy.

Summary

Prognostic information relating to left dominant coronary anatomy and left coronary artery atherosclerosis is sparse. This anatomy appears to be a significant anomaly with protean clinical presentations.

1. Atherosclerosis of the nondominant RCA may result in myocardial ischemia and/or MI involving the right ventricular or left ventricular diaphragmatic walls. Coronary artery spasm may possibly be a contributing factor.

2. Left dominant coronary antomy with left coronary artery atherosclerosis may present as early myocardial ischemia by exercise testing, with or without associated symptoms.

3. Left dominant coronary anatomy with left coronary artery atherosclerosis may present as MI involving the diaphragmatic or anterior left ventricular walls. Left dominant coronary anatomy should be considered in the differential diagnosis of inferior MI and precordial ST segment changes.

4. Consideration for coronary artery bypass grafting should be given to patients with left dominant coronary anatomy and significant stenoses of the LAD and LCX coronary arteries; and those with greater than 50 percent left main coronary artery stenosis. Although patients with left dominant coronary anatomy have been demonstrated to have a higher operative mortality than those with right dominant coronary anatomy by as much as 8 percent, the alternative of early myocardial ischemia and MI would imply a worse prognosis without surgery. The incidence of postoperative symptomatic and silent myocardial ischemia in patients with left dominant coronary anatomy is unknown.

5. The distribution and extent of left coronary artery atherosclerosis associated with left dominant coronary anatomy could not be accurately predicted by presenting electrocardiographic findings.

6. Familial occurrence of left dominant coronary anatomy and coexistent mitral valve prolapse seems

likely in the current series of patients; further study will be needed to exclude association by chance alone.

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Appendix: Case Reports

Case 2 A 45-year-old male was admitted after a 20-minute episode of chest pressure with radiation down the left arm and diaphoresis. Two other episodes had occurred within the preceding 24 hours. He had a history of a negative maximal exercise test three years prior to admission. He had hypercholesterolemia and a family history (father) of left dominant coronary anatomy and a proximal LAD coronary lesion. His prior cardiac history was unremarkable, and he was not on medication. His admission electrocardiogram revealed minimal J point elevation in the inferior leads, and cardiac enzymes were negative. In the coronary care unit he had chest discomfort associated with 1 mm ST elevation in the inferior leads. In an effort to treat his presumed coronary artery spasm, he was begun on topical nitrites, a calcium channel blocker, and a beta blocker. However, the development of repeated episodes of accelerated idioventricular rhythm led to the discontinuation of the beta blocker. Several days later he again experienced chest pressure associated with six hours of 2.5 mm ST elevation in leads II, III, AVF.

Cardiac catheterization showed a normal ejection fraction (64 percent), prolapse of the posterior mitral valve leaflet, left dominant coronary anatomy, and a 75 to 90 percent obstruction of the RCA at the junction of its proximal and middle third. The RCA barely reached the acute margin of the heart.

In view of single-vessel disease with left dominant coronary anatomy, he was discharged on topical nitrites alone. Eight months later he was readmitted with exercise-precipitated chest pain. The ECG showed acute ST elevation in leads II, III, AVF, and subsequent Q waves. Total creatine kinase rose to 588 with 11% MB fraction. The remainder of the hospital course was uncomplicated, and he was discharged on topical nitrites, a calcium channel blocker, and antiplatelet therapy. A follow-up exercise test was normal through stage IV six months later.

Case 3 A 61-year-old female with a history of hypercholesterolemia presented with a 20-minute episode of postprandial lower chest and epigastric discomfort radiating to the neck. She described similar symptoms while walking for the two weeks preceding her presentation. Subsequent to admission progressive T inversions were noted in the precordial leads and a spontaneously resolving episode of atrial flutter with 2:1 AV block. The T-wave abnormalities eventually resolved, and the cardiac enzymes did not indicate myocardial injury. A predischarge stress test was stopped in the first minute of Stage I because of 1 mm ST depression in the inferior and lateral leads, followed by chest tightness with radiation to the throat and down both arms, and increasingly frequent uniform ventricular premature beats.

Catheterization revealed total occlusion of the left anterior descending coronary artery in its proximal third after a large septal perforating branch and left dominant coronary anatomy with a 50 percent obstruction of the proximal small RCA. Elevated left ventricular and diastolic pressure was present. She was discharged on topical nitrites and oral beta blocker. Four months later an exercise test resulted in 2 mm ST depression in the inferior and lateral leads without chest pain but with increasing frequency of atrial and ventricular premature beats. She continues to experience intermittent exertional angina on medical management with topical nitrites, and beta and calcium channel blockers.

Case 4 A 68-year-old male with a history of bladder carcinoma, noninsulin dependent diabetes, and mild hypertension was admitted following one hour of nonexertional retrosternal tightness associated with lightheadness, nausea, and diaphoresis. The ECG was indicative of inferior myocardial ischemia, but cardiac enzymes were negative for myocardial damage. An exercise test showed significant ST depressions inferiorly and anterolaterally at the beginning of stage II. Exercise-induced ventricular bigeminy occurred. Catheterization revealed a proximal 70 percent narrowing of the LAD coronary artery, left dominant coronary anatomy, and a 30 percent narrowing of the first obtuse marginal branch of the LCX coronary artery, followed by total occlusion. Left ventricular ejection fraction was 82 percent, despite inferior-basal hypokinesis.

A sextuple coronary artery bypass procedure was performed. He has remained pain free.

Case 5 A 50-year-old male presented with a six-month history of class II angina and a history of prior anteroseptal MI. An exercise test two months before admission showed 2 mm ST depression during stage II without associated symptoms. Following one hour of chest tightness and palpitations, an ECG showed ST-T changes compatible with inferior myocardial ischemia. Over the course of hospitalization the ECG abnormalities resolved, and cardiac enzymes remained negative.

Catheterization demonstrated hypokinesis of the anterolateral left

ventricular wall, with apical dyskinesis. Left ventricular ejection fraction was 49 percent. The LAD coronary artery was completely occluded proximally, with delayed distal filling via collateral flow. The first obtuse marginal branch of the left circumflex coronary artery showed a 50 percent stenosis. Left dominant coronary anatomy was presented. Medical management with nitrites and beta blocker was instituted, and the patient was discharged.

A repeat exercise test 12 months later was stopped after one minute due to 2.5 mm ST depression, which persisted for ten minutes. Seven-vessel coronary artery bypass surgery was performed. A follow-up exercise test showed 1 mm ST depression during stage III without associated symptoms.

Case 6 A 46-year-old male with hypertension and a two-year history of retrosternal pain radiating down both arms presented with a two-day history of crescendo angina. An ECG showed acute inferior MI with precordial ST segment depression in V5-6. Creatine kinase rose to 894 with positive MB isoenzymes. An exercise test six months later showed 1 mm ST depression stage I with associated exertional hypotension.

Catheterization showed a 50 percent stenosis at the origin of the LAD coronary artery, with a subsequent 90 percent stenosis plus 80 percent stenosis of the first left anterior descending diagonal branch. The LCX coronary artery was normal, except for total occlusion of the first obtuse marginal branch. Left dominant coronary anatomy was present, with a 90 percent stenosis of the mid-right coronary artery.

CABG was performed to the LAD and middle obtuse marginal LCX coronary arteries. A follow-up exercise test was negative through stage II.

Case 7 A 61-year-old male was admitted for evaluation of arrhythmias. He had a year's history of occasional palpitations with associated dizziness. A 24-hour Holter monitor demonstrated high frequency, high grade ventricular ectopy. An exercise test showed frequent multiform ventricular ectopics and a four-beat episode of ventricular tachycardia. An ECG showed loss of inferior forces and borderline T-wave aberrations in V4-6. Oral procainamide was instituted. A radionuclide gated blood pool study showed severe right ventricular dysfunction, with hypokinesis of the distal interventricular septum and left ventricular apex. Intermittent nonexertional chest discomfort occurred.

Catheterization showed two funnel-shaped 50 to 70 percent proximal LAD coronary stenoses plus a 50 percent stenosis of the first LAD diagonal branch. Left dominant coronary anatomy was present, with a normal LCX coronary artery. Nitrites and beta blocker were added to his medical management, with resolution of chest pain symptoms. However, ventricular ectopics and couplets have persisted.

Case 8 A 57-year-old female previously healthy presented after two episodes of nonexertional substernal tightness lasting 30 minutes. An ECG was normal, and cardiac enzymes were negative. She was treated with topical nitrites and oral beta blocker. An exercise test demonstrated 1.5 mm ST depression during stage III without associated symptoms. A repeat exercise test seven months later showed downsloping ST segment depression during stage II with associated chest discomfort. Thallium imaging showed a nonreversible defect at the left ventricular apex.

Catheterization showed minimal mitral valve prolapse without significant mitral regurgitation. The LAD and LCX coronary arteries were normal. Left dominant coronary anatomy was present. She has remained pain free on medical management.

Case 9 A 37-year-old male presented with a five-week history of exertional and cold-induced chest pressure. An ECG was normal.

Catheterization showed normal left ventricular function, with an ejection fraction of 76 percent. An 80 percent stenosis of the LAD coronary artery proximal to the first septal perforator was present; the LCX coronary artery was normal. Left dominant coronary anatomy was present.

LAD coronary angioplasty was performed, with follow-up catheterization showing normal left coronary vessels. An exercise test two years later was negative through stage IV.

Case 10 A 61-year-old male presented with episodic dizziness and a remote history of chest discomfort. A resting ECG showed evidence of prior anteroseptal MI with T-wave inversions in V4-6. A thallium exercise test showed an additional 1 mm ST segment depression in leads V5-6 during stage II without symptoms.

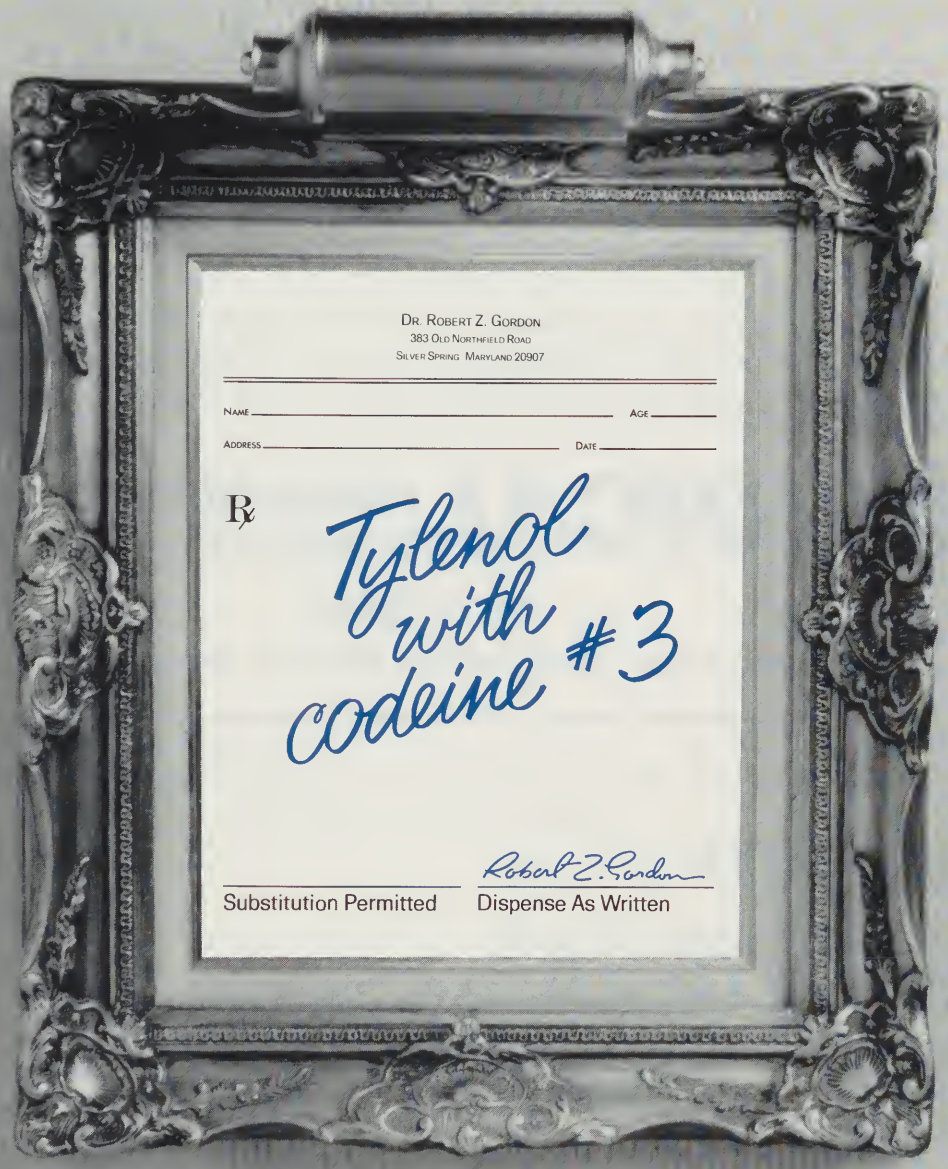
Cardiac catheterization showed a 100 percent occlusion of the LAD coronary artery plus left dominant coronary anatomy. The left circumflex coronary artery showed no significant disease. A cerebrovascular accident occurred shortly after catheterization, with residual dysarthria.

Over the subsequent four years he experienced rare episodes of class II exertional angina, controlled with nitrites and beta blocker. He recently was readmitted with prolonged chest pain and evidence of anterolateral myocardial infarction on ECG, with peak creatine kinase 3300 I.U.

Case 11 A 59-year-old male presented with a year's history of hypertension and intermittent chest discomfort. A resting ECG showed no significant abnormality. A thallium exercise test showed 1.5 mm ST depression stage II in leads III, AVF, and V5-6 without associated symptoms.

Cardiac catheterization showed normal left ventricular function, with an ejection fraction of 0.88. The LAD coronary artery showed two 30 to 40 percent stenoses. The LCX coronary artery showed minimal irregularities in its mid portion. Left dominant coronary anatomy was present.

He is pain free two years later on beta blocker therapy.



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CONFIRMED

CONFIRMED BY CLINICAL EVIDENCE

ZANTAC® 150 h.s.

ranitidine HCl/Glaxo 150 mg tablets

EFFECTIVE MAINTENANCE THERAPY

for healed duodenal ulcer patients

See last page for references and
Brief Summary of Product Information.

Glaxo/ROCHE

CONFIRMED

In two randomized, double-blind, and well-controlled clinical trials, ZANTAC 150 mg h.s. significantly superior to cimetidine 400 mg h.s. for maintenance therapy in healed duodenal ulcers.

Percent of patients with observed duodenal ulcer recurrence

		0-4 months	0-8 months	0-12 months	No. patients
USA[1]	ranitidine 150 mg h.s.	9%	14%*	16%†	60
	cimetidine 400 mg h.s.	23%	34%	43%	66
UK, Ireland, Australia[2]	ranitidine 150 mg h.s.	8%‡	14%‡	23%‡	243
	cimetidine 400 mg h.s.	21%	34%	37%	241

*p=0.02
†p=0.01
‡p≤0.004
%=life-table estimates
All patients were permitted prn antacids for relief of pain.

These two trials used the currently recommended dosing regimen of cimetidine (400 mg h.s.) and ranitidine (150 mg h.s.). A comparison of other dosing regimens has not been studied.

The studied dosing regimens are not equivalent with respect to the degree and duration of acid suppression or suppression of nocturnal acid.

The superiority of ranitidine over cimetidine in these trials indicates that the dosing regimen currently recommended for cimetidine is less likely to be as successful in maintenance therapy.

Convenient once-a-night dose with a

low incidence of side effects[3]

Headache, sometimes severe, seems to be related to ranitidine administration. Other side effects have been reported; for a complete listing, see the **ADVERSE REACTIONS** section in the Brief Summary.

No significant interference with the hepatic cytochrome

P-450 enzyme system at recommended doses

ZANTAC 150 mg has no significant drug interactions with theophylline, phenytoin, or warfarin. The bioavailability of certain medications whose absorption is dependent on a low gastric pH may be altered when ZANTAC or other medications that decrease gastric acidity are administered.

Zantac® 150

ranitidine HCl/Glaxo 150 mg tablets

One tablet at bedtime
for maintenance

See next page for references and
Brief Summary of Product Information.

Glaxo / ROCHE®

CONFIRMED

Zantac® 150

ranitidine HCl/Glaxo 150 mg tablets

One tablet at bedtime for maintenance therapy in healed duodenal ulcer patients

References:

1. Silvis SE, Griffin J, Hardin R, et al: Final report on the United States multicenter trial comparing ranitidine to cimetidine as maintenance therapy following healing of duodenal ulcer. *J Clin Gastroenterol* 1985;7(6):482-487.
2. Gough KR, Korman MG, Bardhan KD, et al: Ranitidine and cimetidine in prevention of duodenal ulcer relapse: A double-blind, randomised, multicentre, comparative trial. *Lancet* 1984;ii:659-662.
3. Data available on request, Glaxo Inc.

ZANTAC® 150 Tablets
(ranitidine hydrochloride)
ZANTAC® 300 Tablets
(ranitidine hydrochloride)

BRIEF SUMMARY OF PRODUCT INFORMATION

The following is a brief summary only. Before prescribing, see complete prescribing information in ZANTAC® product labeling.

INDICATIONS AND USAGE: ZANTAC® is indicated in:

1. Short-term treatment of **active duodenal ulcer.** Most patients heal within four weeks.
2. **Maintenance therapy** for duodenal ulcer patients at reduced dosage after healing of acute ulcers.
3. The treatment of **pathological hypersecretory conditions** (eg, Zollinger-Ellison syndrome and systemic mastocytosis).
4. Short-term treatment of **active, benign gastric ulcer.** Most patients heal within six weeks and the usefulness of further treatment has not been demonstrated.
5. Treatment of **gastroesophageal reflux disease (GERD).** Symptomatic relief commonly occurs within one or two weeks after starting therapy and is maintained throughout a six-week course of therapy.

In active duodenal ulcer; active, benign gastric ulcer; hypersecretory states; and GERD, concomitant antacids should be given as needed for relief of pain.

CONTRAINDICATIONS: ZANTAC® is contraindicated for patients known to have hypersensitivity to the drug.

PRECAUTIONS: Symptomatic response to ZANTAC® therapy does not preclude the presence of gastric malignancy.

Since ZANTAC is excreted primarily by the kidney, dosage should be adjusted in patients with impaired renal function (see **DOSAGE AND ADMINISTRATION**). Caution should be observed in patients with hepatic dysfunction since ZANTAC is metabolized in the liver.

False-positive tests for urine protein with Multistix® may occur during ZANTAC therapy, and therefore testing with sulfosalicylic acid is recommended.

Although recommended doses of ZANTAC do not inhibit the action of cytochrome P-450 enzymes in the liver, there have been isolated reports of drug interactions which suggest that ZANTAC may affect the bioavailability of certain drugs by some mechanism as yet unidentified (eg, a pH-dependent effect on absorption or a change in volume of distribution).

Lack of experience to date precludes recommending ZANTAC for use in children or pregnant patients. Since ZANTAC is secreted in human milk, caution should be exercised when administered to a nursing mother.

ADVERSE REACTIONS: Headache, sometimes severe, seems to be related to ZANTAC® administration. Constipation, diarrhea, nausea/vomiting, and abdominal discomfort/pain have been reported. There have been rare reports of malaise, dizziness, somnolence, insomnia, vertigo, tachycardia, bradycardia, premature ventricular beats, and arthralgias. Rare cases of reversible mental confusion, agitation, depression, and hallucinations have been reported, predominantly in severely ill elderly patients.

In normal volunteers, SGPT values were increased to at least twice the pretreatment levels in 6 of 12 subjects receiving 100 mg qid IV for seven days, and in 4 of 24 subjects receiving 50 mg qid for five days. With oral administration there have been occasional reports of reversible hepatitis, hepatocellular or hepatocanalicular or mixed, with or without jaundice.

There have been rare reports of reversible leukopenia, granulocytopenia, thrombocytopenia, and pancytopenia.

Although controlled studies have shown no antiandrogenic activity, occasional cases of gynecomastia, impotence, and loss of libido have been reported in male patients receiving ZANTAC, but the incidence did not differ from that in the general population.

Incidents of rash, including rare cases suggestive of mild erythema multiforme, and, rarely, alopecia, have been reported, as well as rare cases of hypersensitivity reactions (eg, bronchospasm, fever, rash, eosinophilia) and small increases in serum creatinine.

OVERDOSAGE: Information concerning possible overdosage and its treatment appears in the full prescribing information.

DOSAGE AND ADMINISTRATION: Active Duodenal Ulcer: The current recommended adult oral dosage is 150 mg twice daily. An alternate dosage of 300 mg once daily at bedtime can be used for patients in whom dosing convenience is important. The advantages of one treatment regimen compared to the other in a particular patient population have yet to be demonstrated.

Maintenance Therapy: The current recommended adult oral dosage is 150 mg at bedtime.

Pathological Hypersecretory Conditions (such as Zollinger-Ellison Syndrome): The current recommended adult oral dosage is 150 mg twice a day. In some patients it may be necessary to administer ZANTAC 150-mg doses more frequently. Doses should be adjusted to individual patient needs, and should continue as long as clinically indicated. Doses up to 6 g/day have been employed in patients with severe disease.

Benign Gastric Ulcer: The current recommended adult oral dosage is 150 mg twice a day.

GERD: The current recommended adult oral dosage is 150 mg twice a day.

Dosage Adjustment for Patients with Impaired Renal Function: On the basis of experience with a group of subjects with severely impaired renal function treated with ZANTAC, the recommended dosage in patients with a creatinine clearance less than 50 ml/min is 150 mg every 24 hours. Should the patient's condition require, the frequency of dosing may be increased to every 12 hours or even further with caution. Hemodialysis reduces the level of circulating ranitidine. Ideally, the dosage schedule should be adjusted so that the timing of a scheduled dose coincides with the end of hemodialysis.

HOW SUPPLIED: ZANTAC® 300 Tablets (ranitidine hydrochloride equivalent to 300 mg of ranitidine) are yellow, capsule-shaped tablets embossed with "ZANTAC 300" on one side and "Glaxo" on the other. They are available in bottles of 30 (NDC 0173-0393-40) and unit dose packs of 100 tablets (NDC 0173-0393-47).

ZANTAC® 150 Tablets (ranitidine hydrochloride equivalent to 150 mg of ranitidine) are white tablets embossed with "ZANTAC 150" on one side and "Glaxo" on the other. They are available in bottles of 60 tablets (NDC 0173-0344-42) and unit dose packs of 100 tablets (NDC 0173-0344-47).

Store between 15° and 30°C (59° and 86°F) in a dry place. Protect from light. Replace cap securely after each opening.

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Motrin® 800 mg TABLETS
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J-6138 January 1986

In Hypertension*... When You Need to Conserve K+

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Serum K^+ and BUN should be checked periodically (see Warnings and Precautions)



Before prescribing, see complete prescribing information in SK&F CO. literature or *PDR*. The following is a brief summary.

* **WARNING**

This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

Contraindications: Concomitant use with other potassium-sparing agents such as spironolactone or amiloride. Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: **Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired.** If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K^+ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K^+ intake. **Associated widened QRS complex or arrhythmia requires prompt additional therapy.** Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available. Sensitivity reactions may occur in patients with or without a history of allergy or bronchial asthma. Possible exacerbation or activation of systemic lupus erythematosus has been reported with thiazide diuretics.

Precautions: The bioavailability of the hydrochlorothiazide component of 'Dyazide' is about 50% of the bioavailability of the single entity. Theoretically, a patient transferred from the single entities of triamterene and hydrochlorothiazide may show an increase in blood pressure or fluid retention. Similarly, it is also possible that the lesser hydrochlorothiazide bioavailability could lead to increased serum potassium levels. However, extensive clinical experience with 'Dyazide' suggests that these conditions have not been commonly observed in clinical practice. Angiotensin-converting enzyme (ACE) inhibitors can elevate serum potassium; use with caution with 'Dyazide'. Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids, and during concurrent use with amphotericin B or corticosteroids or corticotropin [ACTH]). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Cumulative effects of the drug may develop in patients with impaired renal function. Thiazides should be used with caution in patients with impaired hepatic function. They can precipitate coma in patients with severe liver disease. Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic and hemolytic anemia have been reported with thiazides. Thiazides may cause manifestation of latent diabetes mellitus. The effects of oral anticoagulants may be decreased when used concurrently with hydrochlorothiazide; dosage adjustments may be necessary. Clinically insignificant reductions in arterial responsiveness to norepinephrine have been reported. Thiazides have also been shown to increase the paralyzing effect of nondepolarizing muscle relaxants such as tubocurarine. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. Triamterene has been found in renal stones in association with the other usual calculus components. Therefore, 'Dyazide' should be used with caution in patients with histories of stone formation. A few occurrences of acute renal failure have been reported in patients on 'Dyazide' when treated with indomethacin. Therefore, caution is advised in administering nonsteroidal anti-inflammatory agents with 'Dyazide'. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine. Hypokalemia is uncommon with 'Dyazide', but should it develop, corrective measures should be taken such as potassium supplementation or increased dietary intake of potassium-rich foods. Corrective measures should be instituted cautiously and serum potassium levels determined. Discontinue corrective measures and 'Dyazide' should laboratory values reveal elevated serum potassium. Chloride deficit may occur as well as dilutional hyponatremia. Concurrent use with chlorpropamide may increase the risk of severe hyponatremia. Serum PBI levels may decrease without signs of thyroid disturbance. Calcium excretion is decreased by thiazides. 'Dyazide' should be withdrawn before conducting tests for parathyroid function. Thiazides may add to or potentiate the action of other antihypertensive drugs. Diuretics reduce renal clearance of lithium and increase the risk of lithium toxicity.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances; postural hypotension (may be aggravated by alcohol, barbiturates, or narcotics). Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and respiratory distress including pneumonitis and pulmonary edema, transient blurred vision, sialadenitis, and vertigo have occurred with thiazides alone. Triamterene has been found in renal stones in association with other usual calculus components. Rare incidents of acute interstitial nephritis have been reported. Impotence has been reported in a few patients on 'Dyazide', although a causal relationship has not been established.

Supplied: **'Dyazide' is supplied** as a **red and white capsule, in bottles of 1000 capsules; Single Unit Packages (unit-dose) of 100 (intended for institutional use only); in Patient-Pak™ unit-of-use bottles of 100.**

BRS-DZ:L42

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One Minute with Diabetes

Loss of Vision

Doctor, the complication of my diabetes that I fear most is blindness. What can I do to prevent it?

First, blindness means total loss of vision or sightless. Almost no one with diabetes develops blindness. Unfortunately too many diabetic patients develop some loss of vision and even "legal blindness" (20/200 or less vision in both eyes). If the term "loss of vision" is used it is less frightening than the word blindness.

After 15 years with diabetes, about 80 percent of these patients will have some retinal changes using current methods of management; with improved management this problem could be reduced by more than half. Improved management consists of:

1. Test your blood glucose several times each day, and follow your diabetes management plan to achieve good control (fasting and 4 hr postprandial blood glucose to be 130 mg/dl or less; glycohemoglobin test within normal limits).
2. See your physician regularly, and make certain that your eyes are checked thoroughly at least once each year.
3. Promptly report any visual changes or problems with your eyes to your physician.
4. Have your blood pressure checked often, and if it is elevated cooperate vigorously with your physician to lower it. Hypertension plus diabetes leads to more severe eye problems than either disease alone.

DeWITT E. DeLAWTER **MD**
Editor

Doctor, Planning to Relocate?

If you are moving or planning to, please let us know so that you won't miss a single issue of the **Journal.** Just fill out the form below and mail it to: Doris Cicchini, **Journal,** 1211 Cathedral St., Balto., MD 21201.

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Baltimore County Medical Association

We're Active! We've Grown to 1,033 Members

In February the County Association sponsored a meeting in Annapolis for the Baltimore County representatives to the State Assembly. It was purposely planned to preceed the 8 P.M. House and Senate meetings. Twenty-four physicians and 17 legislators were present. Tables of eight or ten seated legislators from a specific legislative district seated with physicians from the same district. Mayer Liebman MD, Chairman of the BCMA Legislative Committee, chaired this dinner and described why we were anxious to meet with our representatives. Marianne Benkert spoke on activities of our Peer Review process and H. Margret Zassenhaus MD spoke on our Ethics Committee's activities. I presented the necessity of legislative reform for problems concerning malpractice and how this could, in turn, lead to a decrease in malpractice premiums.

We will soon be updating our pictorial membership directory. It serves many purposes, but most specifically it gives each member the ability to immediately recognize colleagues.

At the February Board of Governors Meeting a new Executive Director was employed, Mrs. Neilson Andrews, who took office on March 2.

On February 11, Joseph Harrison, Med-Chi Controller, described the new "Network Payment System" recently supported by the AMA and explained that Med-Chi would like to install this unique method of physician payments. Baltimore County Medical Association has agreed to send a letter of interest to American Medical Communications, Inc. (AMCOM). At the same meeting our members were made aware of the AMA's February 5 letter with reference to Peer Review and the anti-trust laws. They were assured that the acting Assistant Attorney General of the United States unequivocally stated that Peer Review activities in no way violate the anti-trust laws.

At the March meeting of the Association 92 members were present to hear Donald T. Lewers MD, President, Med-Chi, and Leon Kassel MD, President-Elect, Med-Chi, give an update on contemporary issues.

BERNARD KLEIMAN **MD**
Editor and President

We invite your comments as well as scientific articles. Write *Letters to the Editor* and *Commentary* *MMJ,* 1211 Cathedral St, Baltimore, MD 21201

Members in the News

The Maryland Gerontological Association awarded **Edmund G. Beacham** MD its Certificate of Recognition at the Association's annual meeting on May 1 in Annapolis.

Dr. Beacham was honored for his significant commitment and contributions to geriatrics and gerontology and for his role as a founding member of the Maryland Association in 1982. He served as its first vice president (1982–1984).

In 1972, he initiated the first annual geriatric seminar series in Maryland held as part of the Bicentennial celebration at the Baltimore City Hospitals.

He was chief of the Chronic and Community Medicine Department of the Baltimore City Hospitals and Francis Scott Key Medical Center from 1970–84. Upon his retirement, he was chief of geriatrics in the hospital's medicine department. Two units dedicated to care for older adults—The Beacham Ambulatory Care Center and the Beacham Day Care Center—have been named in his honor.

A Baltimore native, Dr. Beacham attended both Johns Hopkins University and the University of Maryland, College Park, receiving his BS degree from the latter in 1936. He gained his MD from the University of Maryland School of Medicine in 1940.

After interning at Baltimore City Hospitals (1940–41), Dr. Beacham served in the Maryland National Guard with the 29th Infantry Division as Division Surgeon from 1941–46 and continued with the Maryland National Guard until his retirement in 1974. He was made a Brigadier General (ret.) in 1982.

Following World War II, Dr. Beacham returned to Baltimore City Hospitals serving as assistant chief then chief of the Tuberculosis Department (1948–69). He is an Assistant Professor of Medicine Emeritus at Johns Hopkins University School of Medicine and at the University of Maryland Medical School.

• • •

N. Joseph Gagliardi MD, Columbia, has passed the national certification exam of the American Medical Society on Alcoholism and Other Drug Dependencies. Dr. Gagliardi, a physician with the Patuxent Medical Group Inc. (providers to the Columbia Medical Plan), is one of only 700 physicians across the country recognized by the society as an expert in the field of chemical dependence.

A board certified family physician, Dr. Gagliardi directs the addiction services for the Columbia Medical Plan. He designed and implemented this program shortly after joining the Patuxent Medical Group in 1983.

Dr. Gagliardi received a master's degree in counseling from the University of Maryland in 1975 and worked as a chemical abuse counselor in Prince George's County prior to attending medical school. He received his medical degree from the State University of New York at Buffalo in 1979. While there, he established a faculty committee that developed training courses on alcoholism and chemical abuse for medical students.

Dr. Gagliardi is also chairman of the Committee on Substance Abuse of the Maryland Academy of Family Physicians and serves on the Committee on Alcoholism and Drug Abuse of Med-Chi.

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Philip J. Whelan MD has been appointed Chief of Pathology at Maryland General Hospital. He was graduated from Washington College in Chestertown, MD and received his medical degree from the University of Maryland Medical School. He completed both an internship and residency in Anatomic and Clinical Pathology at St. Agnes Hospital.

Dr. Whelan is Board Certified in Anatomic and Clinical Pathology, is a Fellow of the College of American Pathologists and the American Society of Clinical Pathologists.

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July	*Jeffrey F. Witte MD*	*301-340-9200*
	Jeanette A. Plante, Esq.	*301-752-1630*
August	*Robert O. Kan, MD*	*301-321-7011*
	John Wheeler Glenn, Esq.	*301-685-1500*

Maria Asuncion Calixto Barretto

Maria Asuncion Calixto Barretto (better known to us as Ching Barretto) will be the 1987–1988 President of the Auxiliary to the Medical and Chirurgical Faculty of the State of Maryland. Ching has the distinction of being the first Filipino Auxiliary President.

Both Ching and her husband Alberto hail from Manila, The Philippines. They grew up living a block from one another, and the families were friends. They were married in 1962: Ching was then a senior in college and Bert was a resident in Orthopedic Surgery at US Air Force Hospital, Clark Air Force Base, Philippines. Ching graduated from the Philippine Women's University with a bachelor of science degree in Business Administration. Bert graduated from the Far Eastern University Institute of Medicine in 1961. Family life started with internship at Deaconess Hospital in Buffalo, NY; on to Sinai Hospital in Baltimore; and completion of Orthopedic residency at Allegheny General Hospital in Pittsburgh in 1966. Next came a stint in the Navy, at the US Naval Hospital in Subic Bay, Philippines. The Vietnam War at its height was a hectic time for Bert, but it offered Ching and the children a chance to be close to their families in Manila.

The Barrettos have four children, Joseph (23) and Paul (22) who are seniors at the University of Maryland in Baltimore County; Patrick (20) is at the University of Richmond; Julie (13) attends St. Joan of Arc School in Aberdeen.

Dr. Barretto is a board certified orthopedist in practice with offices in Havre de Grace and Fallston.

Ching has been active in the Harford County auxiliary since settling there in 1971. She served as its president for two terms in 1979 to 1981. She is also a member of the Harford Memorial Hospital Auxiliary and was active in its Surgical Hostess Service. She has been site coordinator of the Aberdeen-Havre de Grace Health Fair. She has been active in the Home School Assocation at St. Joan of Arc School and has served as its president. Ching is a regular contributor to Our Daily Bread, a soup kitchen in Baltimore. Ching has held different state auxiliary positions since 1981 and always has been an active participant in the Lady Equitable Race. Each year she has raised at least $500 for AMA-ERF; this year she hopes to raise $1,000.

At the 1986 Summer Board Meeting at her home in Darlington, Ching presented a "Member Shopping" program, in which she invited everyone to go shopping for members. The program featured "Duluth Bear" (a gift from the membership challenge from the Minnesota Auxiliary), who was to travel to all counties to help the membership drives. The member-shopping campaign has been submitted to the National Auxiliary project Bank in Chicago.



Other areas of Ching's auxiliary interests include Health Education and Legislation. She believes auxiliians should become actively involved in the struggle for liability reform and other issues that affect the practice of medicine.

Ching says "The Auxiliary has been such a rewarding experience for me that assuming the role of President is a small way for me to say thank you." She has an infectious enthusiasm coupled with a cheerful optimism that has won many friends and supporters. Family and religion are a central part of Ching's life. There is always company at the Barretto household. The kitchen table seats twelve and often is filled with family and out-of-town guests. The Auxiliary is fortunate to be under the able leadership of such an energetic and dedicated President.

HELEN REICHEL

Auxiliary to the Medical and Chirurgical Faculty of the State of Maryland. Mrs. Ching Barretto President; Mrs. Nancy H. Howell Editor.

Discipline Commission Action

In the Matter of Karel B. Abolson MD Before the Commission on Medical Discipline

Findings of Fact, Conclusions of Law, and Order

Certain information having come to the attention of the Commission on Medical Discipline of Maryland (the "Commission"), the Commission, pursuant to Health Occupations Article, §14–501, determined to charge Respondent with a violation of §14–504(22) of the Act.

In particular the Commission charged that the Respondent had been disciplined by a licensing or disciplinary authority for an act that would be ground for disciplinary action under §14–504(4) of this section, professional incompetence.

Notice of the charge and the allegations supporting the charge was given to Respondent by letter dated April 23, 1986. A prehearing conference was scheduled for June 3, 1986 and held on that day. As a result of the conference it was agreed that the Peer Review Committee (the "Committee") of the Medical and Chirurgical Faculty would review Respondent's practice. Following a review and report by Med-Chi, the Commission makes the following Findings of Fact and Order.

Findings of Fact

1. At all times relevant to this Order, Respondent was licensed to practice medicine in Maryland.

2. Respondent's practice was reviewed by the Peer Review Committee of the Medical and Chirurgical Faculty which found no evidence of professional incompetence.

Conclusions of Law

Based on the foregoing Findings of Fact, the Commission concludes as a matter of law that Respondent is *not* professionally incompetent.

Accordingly, the Commission adjudicates Respondent NOT GUILTY of violating §14–504(22) of the Health Occupations Article of Maryland Annotated Code.

Order

Upon the foregoing Findings of Fact and Conclusions of Law, it is this 11th day of February 1987, by a unanimous vote of those members of the Commission on Medical Discipline of Maryland who considered this case,

ORDERED that the charges against Respondent are DISMISSED.

HILARY T. O'HERLIHY **MD, Chairman**
Commission of Medical Discipline

On instruction of the Council of the Medical and Chirurgical Faculty of the State of Maryland, "Findings of Fact, Conclusions of Law, and Order" will be published in the Maryland Medical Journal.

In the Matter of Nathan L. Centers MD Before the Commission on Medical Discipline

Order for Emergency Suspension of License Findings of Fact

Based on information provided to the Commission on Medical Discipline (the "Commission"), the Commission finds that:

1. Respondent is a physician licensed to practice medicine in the State of Maryland.

2. Respondent came to the attention of the Medical and Chirurgical Faculty's Committee on Physician Rehabilitation in January 1982 as a result Respondent having entered the Seneca House for a 29-day alcoholism treatment.

3. Since January 1982 Respondent has entered at least four (4) major programs for the treatment of alcohol and/or substance abuse.

4. The most recent episode evidencing substance addiction and abuse occurred on February 17, 1987 when Respondent was found on the grounds of Sheppard Pratt Hospital ("Sheppard Pratt") in an intoxicated and addictive state.

5. Staff at Sheppard Pratt on February 17, 1987, arranged to have Respondent transferred to the Greater Baltimore Medical Center for detoxification and suspected overdose.

6. On February 24, 1987, Respondent was transferred to Sheppard Pratt for treatment of chemical dependency and possible psychiatric problems.

7. On March 26, 1987, Respondent was discharged from Sheppard Pratt to Keswick House, a halfway house for the treatment of drug abusers and addictive individuals on an out-patient basis.

8. While at Keswick House, Respondent will have the opportunity to practice medicine; Respondent's license to practice medicine is not restricted in any way.

9. Prior to admission to Sheppard Pratt, Respondent practiced medicine in settings where he was unsupervised in handling patients and unsupervised in his access to controlled dangerous substances.

10. Respondent's addictions to alcohol and controlled dangerous substances is evidence of and responsible for Respondent's lack of judgment and ability to practice medicine safely.

11. Based on the foregoing findings, the Commission finds that there is reasonable cause to believe that Respondent:

Is professionally, physically or mentally incompetent; §14–504(4), Maryland Medical Practice Act, Title 14, Health Occupations Article, Annotated Code of Maryland (the "Act")

Is habitually intoxicated; §14–504(8) of the Act

Is addicted to or habitually abuses, any narcotics or controlled dangerous substances as defined in Article 27 of the Code. §14-509(9) of the Act.

12. The Commission concludes that for reasons set

forth in the foregoing paragraphs, emergency action is imperatively required in this case pursuant to State Government Article, §10–405, Annotated Code of Maryland (the Administrative Procedure Act) because in light of the foregoing, Respondent's continued possession of a license to practice medicine poses an imminent and grave danger to public health, welfare, and safety.

Order

It is this 27th day of March 1987, by the Commission on Medical Discipline of Maryland:

ORDERED that pursuant to the authority vested in the Commission by State Government Article, §10–405 of the Annotated Code of Maryland, Respondent's license to practice medicine is hereby SUMMARILY SUSPENDED; and it is further

ORDERED that on presentation of this Order, Respondent shall immediately deliver to the Commission:

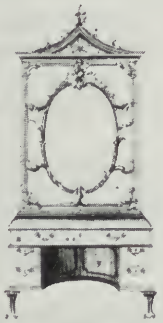
1. His complete license to practice medicine in the State of Maryland and

2. All permits issued to him to prescribe controlled dangerous substances, and it is further

ORDERED that a hearing shall be held before the Commission within thirty (30) days of the date upon which the Commission receives a request from the Respondent for a hearing to consider this emergency suspension.

HILARY T. O'HERLIHY **MD, Chairman**
Commission on Medical Discipline

Discipline Commission Actions
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Library Page

Selected Medical Literature Searches

The following are among the computerized medical literature searches provided to Med-Chi members during March 1987.

1. Asthma and patient education 28
2. Diagnostic use of sincalide in biliary or liver diseases 12
3. Meralgia paresthetica 25
4. Occupational eye injuries 19
5. Osteonecrosis and adrenal cortex hormones . . 18
6. Pericardial cysts 32
7. Posttraumatic stress disorders in children . . . 32
8. Risks and complications of breast implants . . 24
9. Therapeutic equivalency of psychotropic drugs 16
10. Urinary calculi and citrates 20

If you would like a copy of one of these searches or a search run on any biomedical topic, call or write the library.

SUSAN E. HARMAN
Reference and Circulation Librarian

Medical and Chirurgical Faculty of the State of Maryland Library, 1211 Cathedral Street, Baltimore, MD 21201. Joseph E. Jensen, Librarian.

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Doctors Take Note

University of Maryland School of Medicine

CME Courses: For each course additional information may be obtained by contacting Program of Continuing Education, University of Maryland School of Medicine, Room 300, MSTF, 10 South Pine St., Baltimore, MD 21201 (301-328-3956).

June 21–26 13th Annual Family Medicine Review Course, Carousel Hotel, Ocean City. Fee: $395, 21 AMA Cat I and 21 AAFP credits.

June 25–27 Dermatology Days, Carousel Hotel, Ocean City. Fee: $275, 12.75 AMA Cat I and 12 AAFP credits.

Sep 18–20 Clinical Mass Spectrometry, Harbor Court Hotel, Baltimore. Fee: TBA.

Visiting Professor Programs—Directory of speakers and topics available for area hospitals and other health care organizations. An administrative fee is charged. Info: 301-328-3956.

Visiting Practitioner Preceptorships—Opportunity for physicians to participate in clinical situations in the University of Maryland Hospital. Requires approval from clinical department heads. Direct inquiries to CME. Hour-for-hour AMA Cat I credits.

Sep thru Jun—Departmental Rounds and Conferences—Hands-on opportunity for practicing physicians, including lectures and discussions, produced by clinical departments. Hour-for-hour AMA Cat I credits.

CME's 1987–1988 Calendar of Courses will be available before the formal academic year begins. Send requests to above address. Begin now to plan your continuing education for the year.

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Miscellaneous Meetings

Jul 6–8 NIH Consensus Development Conference: The Differential Diagnosis of Dementing Diseases, Warren Grant Magnuson Clinical Center, NIH, Bethesda. Info: M. Bernstein, Prospect Assoc., Ste 500, 1801 Rockville Pike, Rockville, MD 20852 (301-468-6555).

July 13–15 NIH Consensus Development Conference: Neurofibromatosis, Warran Grant Magnuson Clinical Center, NIH, Bethesda. Info: B. McChesney, Prospect Assoc., Ste 500, 1801 Rockville Pike, Rockville, MD 20852 (301-468-6555).

Jul 17–19 Practical Internal Medicine: Selected Topics for the Internist, Medical College of Virginia CME Activity, Cavalier Resort, Virginia Beach, VA. Fee: $295. Info: K. Martin, 804-786-0494.

Jul 24–26 Ninth Annual Pediatric Primary Care Conference: Pediatrics at the Beach, Medical College of Virginia CME Activity, Cavalier Resort, Virginia Beach, VA. Fee: $275; 14.25 AMA Cat I credits, 14.25 PREP credits, 1.4 CEU credits. Info: A. Potter, 804-786-0494.

Sep 10–11 NIH Technology Assessment Workshop on the Health Benefits of Pets, Masur Auditorium, Warren Grant Magnuson Clinical Center, NIH, Bethesda. Info: S. Feldman, Prospect Assoc., Ste 500, 1801 Rockville Pike, Rockville, MD 20852 (301-468-6555).

Sep 28–30 Community Re-Entry Following Head Injury—Return to Work, School, Family, and Social Life for Adults and Children, sponsored by the Rehabilitation Institute of Pittsburgh, at the Vista Hotel, Pittsburgh, PA. Info: Training Dept, Rehabilitation Institute of Pittsburgh, 6301 Northumberland St., Pittsburgh, PA 15217 (412-521-9000).

• • •

The Johns Hopkins Medical Institutions

All courses at the Turner Auditorium Building unless otherwise indicated. Sponsored Continued Education Activities for 1986–87. Info: Office of Continuing Education, 720 Rutland Ave., Turner Auditorium, Baltimore, MD 21205 (301-955-5880).

Jul 9 Planning Functional Endoscopic Surgery by CT. Fee: $150; AMA Cat I credits. Info: C. Kearney 301-955-3168.

Jul 13–17 Control of Biohazards in the Research Laboratory. Info: F.S. Tepper 301-955-5918 or J. Corn 301-955-2609.

Sep 18–20 Diagnostic Ultrasound in Obstetrics and Gynecology, Baltimore Marriott, Inner Harbor Hotel. Fee: $325 physicians, $250 sonographers/RNs; 19 AMA Cat I credits, ACOG cognates available, ASRT credit. Info: C. Kearney 301-955-3168.

Oct 15–17 Thirteenth Annual Topics in Gastroenterology and Liver Disease. Fee: $340 physicians, $170 residents and fellows (with letter verifying status); 20.5 AMA Cat I credits. Info: J Ryan 301-955-6046.

Johns Hopkins Medical Grand Rounds: audiocassettes, slides, and booklet. 30 topics and 40 AMA Cat I credits/year. Contact 301-955-3988, Office of Continuing Education, 720 Rutland Ave., Baltimore, MD 21205.

Ophthalmic Electrophysiology Technican Training Course (on-going 1-week course by appointment), The Wilmer Eye Institute, Baltimore. Info: C.M. Kearney.

The Department of Radiology and Radiological Science offers several courses in abdominal and obstetrical ultrasound: Courses scheduled 1/12/87–12/7/87. Info: J. Mosmiller 301-955-8450.

Basic Practicum, Nov 16–20. Fee: $460; 40 AMA Cat I credits.

Advanced Practicum in Ultrasound Dec 7–11. Fee: $460; 40 AMA Cat I credits.

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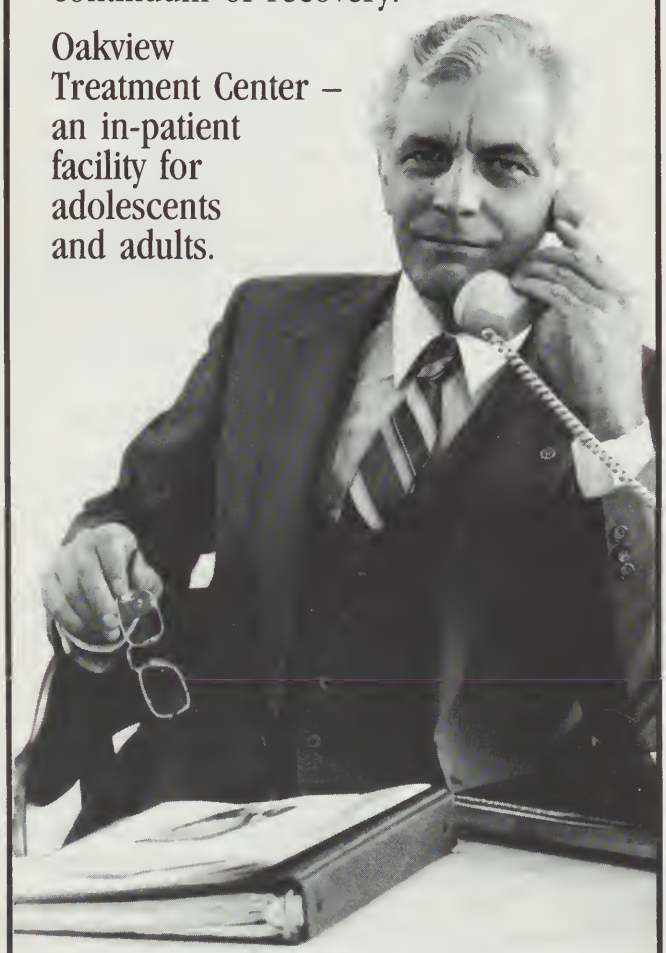
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Meridian Healthcare 485
Montebello Hospital 506
Montessori Society of Central Maryland 497
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ad·dict \ ə-'dikt \ *vb* **1 :** to devote or surrender (oneself) to something habitually or excessively **2 :** to cause (a person) to become physiologically dependent upon a drug

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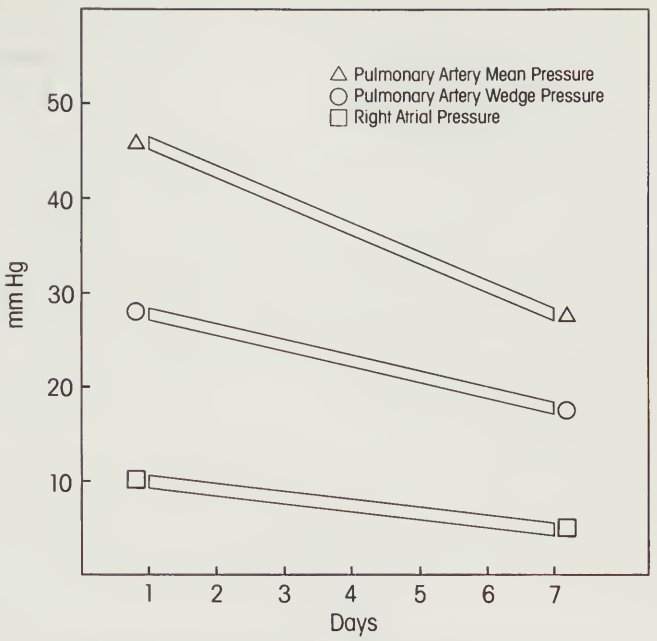
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Ten patients with CHF showed marked hemodynamic improvement after seven days of BUMEX®(bumetanide/Roche) (mean values ± SE). Adapted from Olesen, *et al.*[1]

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Patients should be observed regularly for possible occurrence of blood dyscrasias, liver damage or idiosyncratic reactions.
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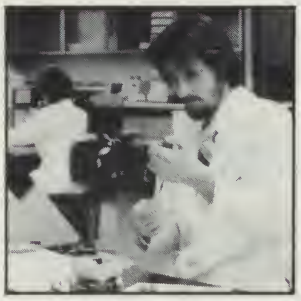
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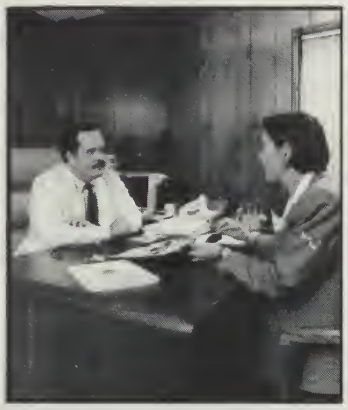
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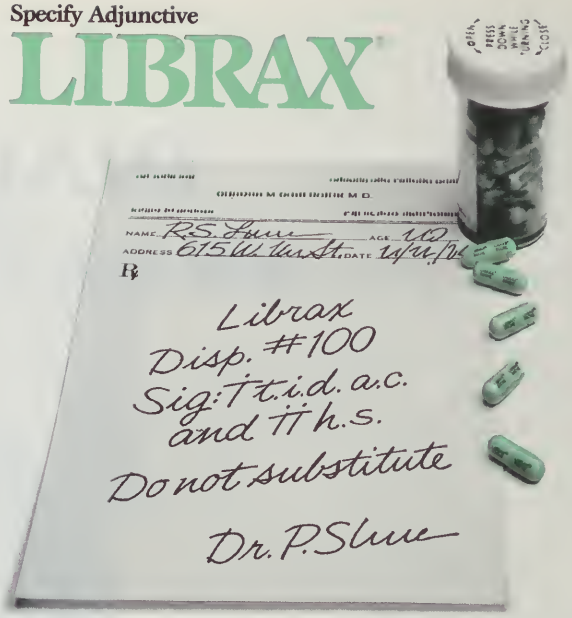
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*Librax has been evaluated as possibly effective as adjunctive therapy in the treatment of peptic ulcer and the irritable bowel syndrome.

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Epidermoid Carcinoma of the Head and Neck: Diagnosis

Early diagnosis is the responsibility of the dentist and the primary care physician. It is estimated that a primary care physician may see one patient with head and neck cancer every three years in his or her practice. This rare incidence may lower the index of suspicion, and therefore, the physician or dentist may not impress upon the patient the necessity of returning within two to three weeks to check the effect of treatment.

Antibiotics are prescribed almost universally at the patient's first visit. A second course of antibiotics frequently is prescribed in the face of unchanging symptoms without thorough re-examination. This delays referral of the patient, leading to delay of diagnosis and treatment. A mass, especially one that is asymptomatic, should be observed for a maximum of two to three weeks while the patient is under prescribed treatment. If there is no significant improvement, the patient should be referred to the cancer surgeon.

If the primary care physician or dentist suspects cancer, he or she should share this concern with the patient and refer that person to the cancer surgeon. The referring physician can protect himself legally by checking to be sure that the patient kept the appointment with the cancer surgeon.

Primary lesions may present in a variety of forms: leukoplakia, erythroplakia, or exophytic, ulcerative, or infiltrative ulcers. The term "leukoplakia" is to be used only as a clinical descriptive term meaning a white patch. The significance of this white patch depends on the histological findings, which can range from hyperkeratosis to an actual early invasive carcinoma. It also may present as a fungus infection or other oral diseases. On the other hand, "erythroplakia," a velvety red area in the mucosa, is more ominous of cancer. Punch biopsy of localized areas of leukoplakia or erythroplakia may miss the site of carcinoma and lead the physician and the dentist to a false sense of security. Therefore, these should be totally excised and the specimen properly marked to orient the pathologist for serial histological examination.

Highly suspicious lesions are best evaluated prior to excisional biopsy by the physician who will eventually make the decision as to the best course of management: surgery, radiotherapy, chemotherapy, or some combination of these. This evaluation is best achieved prior to any surgical intervention, so as to ascertain the size of the lesion, its local extension, and the presence or absence of metastatic disease. For example, inadequate excisional biopsy of a lesion of the floor of the mouth, may mask the actual extent of the tumor and may cause obstruction of Wharton's ducts, inducing enlargement of both submandibular salivary glands, which could be confused with metastasis. Therefore, the initial evaluation prior to any surgery is best performed by the physician who will be responsible for the total management of that patient.

The biopsy of an obvious primary lesion should be **incisional** rather than **excisional**. A deep incisional biopsy that obtains tissue below any piled-up keratin covering is necessary to establish the diagnosis without confusing the extent of the disease.

Occasionally, a patient may present with a mass in the neck. An open biopsy of this mass will yield the histological diagnosis, but this will **not** indicate the origin or the extent of the primary tumor and encourages the spread of the tumor in the neck, making it necessary to resect a large area of the overlying skin and interfering with the usually anatomical surgical plans for definitive therapy. Therefore, prior to the biopsy of the mass in the neck, it is recommended that such patients undergo complete and adequate head and neck examination (including an indicated direct endoscopy, x-rays of the sinuses, nasopharynx, larynx, and chest) and a general physical examination including pelvic and rectal examination. If all these fail to reveal the source of the primary tumor, then a needle biopsy is recommended, except in those patients in whom the clinical impression is of a carotid body tumor. If the needle biopsy fails to make a definite diagnosis, open biopsy is justified and should be performed by the cancer surgeon who is going to plan the therapy.

Sometimes, the physician responsible for the management of the patient with head and neck neoplasm, who has been biopsied outside this institute, cannot afford to depend on such diagnosis. He or she should review all the slides and may need another biopsy. Furthermore, it must be emphasized that a skilled clinician is more often right than wrong in making the diagnosis. Therefore, if a biopsy is reported benign, it may have to be repeated with the explicit instruction to the pathologist that many serial sections be performed.

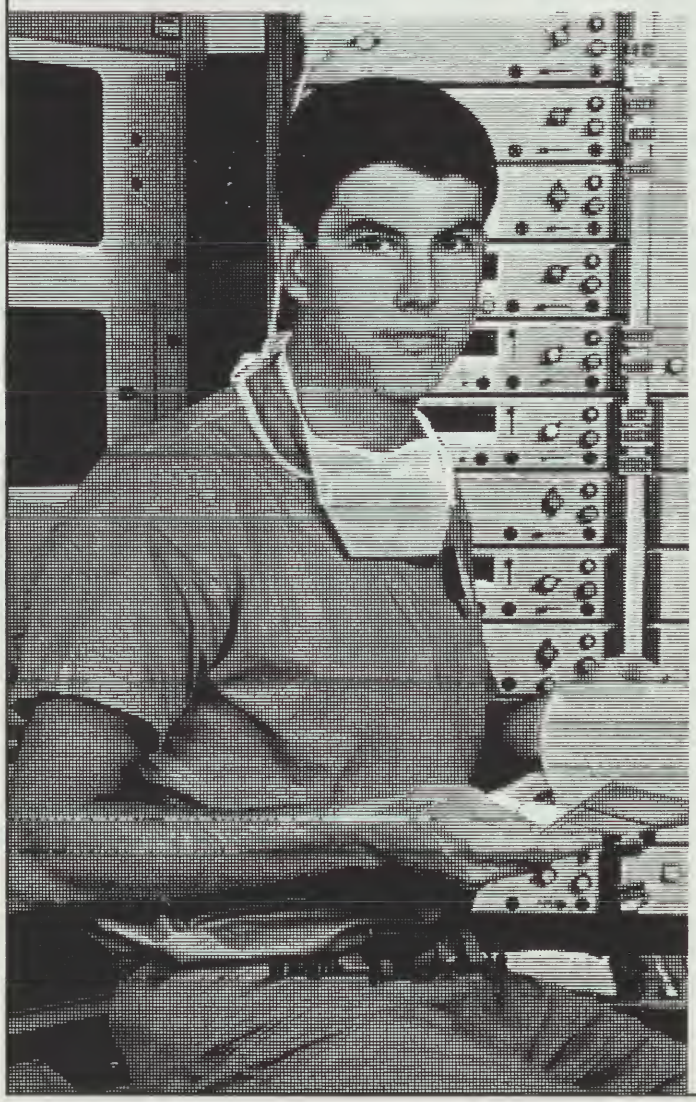
Biopsy of the larynx, hypopharynx, or nasopharynx will cause edema and distortion of the neoplasm as far as its extent and size. Radiological studies, either in the form of plan soft tissue x-rays, tomograms, or contrast studies can be interpreted erroneously if performed following such biopsies. Therefore, such radiological studies are best performed prior to biopsies of these areas.

Tumor Conferences are held weekly on Tuesdays between 8 and 9 a.m. in Room N13E28 at the University of Maryland Hospital. This is an open meeting and physicians are welcome to attend and present cases, but please call 328-5224 before noon on Monday to obtain time on the schedule for your case(s) and bring pathological slides with you.

E. GEORGE ELIAS MD
Professor of Surgery and Oncology
Director, Surgical Oncology Program

If you have any questions, call or write the Surgical Oncology Program at the University of Maryland Medical Systems, Room N13E02, Baltimore, Maryland 21201 (301-328-5224).

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MARYLAND DEPARTMENT OF HEALTH AND MENTAL HYGIENE

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JULY 1987

IMMEDIATE REPORTING OF RESISTANT GONORRHEA

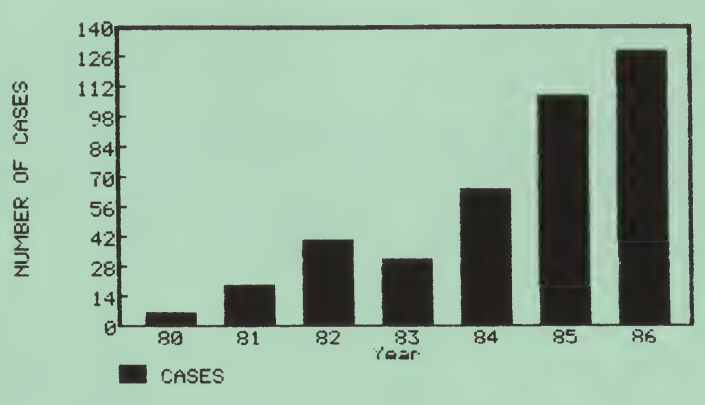
Reported cases of gonorrhea caused by Neisseria gonorrhoeae resistant to penicillin, continue to increase in Maryland. In addition to penicillinase producing N. gonorrhoeae (PPNG) and chromosomally mediated resistant N. gonorrhoeae (CMRNG), tetracycline resistant N. gonorrhoeae (TRNG) has been identified in the state. TRNG was first reported in Prince George's County in early 1985, and has been periodically reported from Baltimore City, Montgomery, Wicomico, Dorchester, and Caroline Counties. One hundred and twenty-eight (128) cases of gonorrhea resistant to standard treatment was reported in Maryland in 1986--a 19% increase from 1985.

Furthermore, reported cases of PPNG continue to increase nationally. In 1986, 16,608 PPNG infections were reported to the Centers for Disease Control (CDC), a 90% increase from 1985. Almost one-third of those cases was reported from Florida alone. Another fourth were reported from New York City. This increase in PPNG and TRNG has been one of the main factors affecting the effective control of gonorrhea within the United States and in Maryland.

We are requesting Maryland physicians to immediately notify by telephone the Division of Sexually-Transmitted Diseases (STD) at (301)-225-6688 upon diagnosing a patient with PPNG or any other resistant gonorrhea. All reports are held in the strictest confidence. Before any follow-up is conducted, Division of STD representatives will consult with physicians to verify the diagnosis and discuss the treatment. In this way, disease spread and trends may be accurately monitored, effective treatments maintained, and resources appropriately directed in the community. All local health departments offer STD patient referral and follow-up services.

Prompt telephone referral of PPNG cases will enable the disease intervention process to proceed without delay.

RESISTANT GONORRHEA IN MARYLAND 1980-86



INCREASE IN EARLY SYPHILIS

During the first quarter of 1987, as compared to the first quarter of 1986, the United States experienced a 25% increase in reported early syphilis. Maryland had a 42% increase during the first quarter of 1987 as compared to the similar period of 1986. It would appear that the increase in Maryland is due in part to an increase of infection among heterosexuals. This increase in an STD, such as syphilis, has occurred in the face of the AIDS epidemic. If this trend continues, we may see an increase in congenital syphilis and its devastating effects to infants. We ask that physicians maintain a high index of suspicion for syphilis. Additionally, treat those patients who have been exposed to infectious syphilis within the preceding three months and other patients who are at high risk for early syphilis. STD treatment schedules are available, at no cost, from the Division of Sexually-Transmitted Diseases, Maryland State Department of Health and Mental Hygiene, (301) 225-6688.

CHLAMYDIAL INFECTIONS

Infections caused by Chlamydia trachomatis are now recognized as the most prevalent - and are among the most damaging - of all STD diseases seen in the United States today. An estimated 3-4 million Americans suffer from a chlamydial infection each year. Men, women, and children are affected, but women bear an inordinate burden because of their increased risk for adverse reproductive consequences.

The Division of Sexually-Transmitted Diseases currently recommends treatment with antibiotics effective against chlamydial infection for all those patients diagnosed with gonorrhea and gonococcal pelvic inflammatory (PID) disease. The Division of STD also monitors public laboratories for numbers of chlamydial tests done, and percent of those tests which are positive. We are requesting Maryland physicians to report, in writing, chlamydial infections on the DHMH-1140 (morbidity card) and send to the Division of STD, 201 West Preston Street, Baltimore, Maryland 21201. By evaluating these confidential reports, we will be able to monitor disease trends and reallocate resources.

ANIMAL BITES

According to the United States Public Health Service, more than 1 million bites occur each year that require medical attention and account for about 1% of all emergency hospital visits. In Maryland alone, there are 11,000 to 12,000 bites that are reported each year. Of all animal bites, 90% are due to dogs, 6% are due to cats, and 4% are due to other animals. The part of the body most likely to become infected, if bitten, is the hand; the face may also be involved, especially in children. The age groups most commonly involved are 5-14 year old children and 20-29 year old adults. The animals involved are usually pets of the family or of friends.

The oral flora of dogs include Pasteurella multocida, Streptococcus spp., Staphylococcus aureus, Staphylococcus epidermidis, Staphylococcus saprophyticus, Neisseria spp., unclassified Gram negative rods (DF 2, EF 4 and others) and anaerobes. The oral flora of cats is more likely to contain P. multocida. Most patients develop infections within 36 hours of being bitten, regardless of the nature of the organism. P. multocida is associated with a rapid development of infection after injury. Among animal bite victims who are not immediately hospitalized, infections develop in 4% of dog bite and 35% of cat bite victims. Dog bites have also transmitted Brucellosis and Blastomycosis. Cat bite wounds may also transmit plague, tularemia and cat scratch disease.

Animal bites should be vigorously cleansed, thoroughly irrigated, preferably under high pressure, and carefully debrided. Cleansing may be carried out with a Povidone iodine solution and fine mesh sponges. Povidone iodine is recommended as having an excellent antiviral and antibacterial spectrum of action. Management should always include assessment of the tendons, motor and sensory functions of the involved area. Controversial therapeutic aspects include prophylactic antibiotics; Penicillin or Amoxicillin--Clavulanic acid for a broader spectrum may be recommended especially for all hand and deep puncture wounds. Antibiotic therapy for patients who are hospitalized with severe infection, cellulitis across a joint, dysfunction of a hand, abscess formation or because the patient is non-compliant should include intravenous Penicillin or parenteral Ticarcillin--Clavulanic acid. Changes in the antibiotic may be made, if necessary, when culture and sensitivity results are available.

Complications of cat and dog bites include osteomyelitis, septic arthritis, recurrent abscesses or cellulitis, tenosynovitis, brain abscesses, bacteremia and disseminated intravascular coagulation. Risk factors that predispose to the development of these complications include a delay of more than 24 hours in seeking treatment, puncture wounds, hand wounds, poor choice of wound cleansing or suture material, patient age of more than 50 and underlying host conditions such as immunosuppression or a previous splenectomy.

Rabies prevention, including hyperimmune serum and active immunization should be instituted as required, e.g., bites from wild untested animals or when the cat or dog is not available for

quarantine. A tetanus toxoid booster should be administered if the patient has been adequately immunized with the last dose within the previous 10 years. Tetanus immune globulin is required if tetanus immunization has never taken place or is not up to date.

Methods of preventing the occurrence of animal bites include public education regarding the inadvisability of petting stray or unfamiliar dogs or cats, the danger of teasing animals, the necessity of implementing licensure and leash laws and the careful selection of a pet with characteristics and breeding appropriate for living with humans.

References available upon request.

MULTI-STATE OUTBREAK OF SHIGELLA SONNEI GASTROENTERITIS

On May 26, 1987, the Baltimore County Health Department was notified of shigella cases among students and families associated with four private Jewish schools in Baltimore County, Maryland. Between April 7th and June 14th, 1987, 42 culture-confirmed and 54 probable cases of S. sonnei gastroenteritis occurred in 33 families residing in northwest Baltimore City and adjacent Baltimore County. Among 87 cases for whom age was known, 43% were less than 6 years old. Symptoms included diarrhea (98.9%), fever (73.6%), abdominal cramps (62.6%), vomiting (21.8%), and bloody diarrhea (10.3%). Index case children had attended one day care center, 3 day care homes, 4 private Jewish schools, and one public school. All S. sonnei isolates tested have been resistant to ampicillin but sensitive to TMP-SMX and tetracycline.

No common source for the outbreak has been identified. Person-to-person transmission appears likely in day care, schools, and homes. Although visiting with friends and family from New York was commonly reported, no cases have been linked directly with confirmed cases in New York. Inspections have been performed and hygiene emphasized in schools, day care, summer camps, pools, restaurants, and food stores in an effort to limit transmission.

Thorough handwashing with soap and water after defecating and before eating has been shown to decrease secondary transmission of shigellosis in Bangladesh. Though often difficult to implement among children and families at highest risk, shigellosis control strategies which emphasize effective handwashing with soap and water may interrupt the chains of transmission. Creative interventions should be encouraged using handwashing protocols, posters, and counseling sensitive to local language and custom.

Antimicrobial treatment has been used for shigella to decrease morbidity and decrease secondary spread of infection. However, shigella has repeatedly developed plasmid-mediated multiple antimicrobial resistance. The decision to treat mild and self-limited illness with antimicrobials should be weighed against the risk of selecting resistant strains.

SOURCE: Morbidity and Mortality Weekly Report, Centers for Disease Control (CDC), in press July of 1987.

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Executive Director's Newsletter

July 1987

REDUCTION IN RATE INCREASE

On Monday, June 29, 1987, representatives from Med-Chi attended a press conference held by Lt. Governor Melvin Steinberg, Secretary of Licensing and Regulation William A. Fogle, Jr., and Insurance Commissioner Edward Muhl announcing a further reduction in the malpractice insurance rate increase by Medical Mutual. Through tireless efforts by Lt. Governor Steinberg and much of his staff, especially Alan M. Rifkin, Secretary Fogle, and Commissioner Muhl, the previously announced 32% rate increase has been reduced to 24%.

Representatives from Medical Mutual have agreed also to greatly modify a controversial obstetrical program of surcharges that would have drastically curtailed obstetrical service in rural areas of the state.

Governor Schaefer has once again shown his unwavering commitment to the physicians of Maryland and their patients.

ROBERT WOOD JOHNSON GRANT

Med-Chi's Information Services Department is part of a major three-year grant to the Johns Hopkins University to demonstrate the effects of improved peer review on medical malpractice. The grant will cover production costs of a guidebook for Med-Chi's component societies on the legal requirements for peer review.

Another component of the grant will be development and operation of an on-line data system to provide hospital credentialing and disciplinary committees with timely and accurate information related to actions by the Commission on Medical Discipline, actions against a physician's privileges or employment for disciplinary reasons, and all malpractice suits filed against a physician. The on-line system also will facilitate hospitals reporting disciplinary actions against physicians to the Commission.

The Maryland Hospital Association is a third partner in the grant project. MHA will be developing a handbook similar to that for component societies but for hospital peer review committees.

RESOLUTIONS DEADLINE

The deadline for submission of resolutions for consideration at the 1987 semiannual session of the House of Delegates is MONDAY, AUGUST 3, 1987. Resolutions must be sponsored by a member or component society of the Faculty, the Council, or committees of the Faculty. A resolution introduced by an individual member must have the endorsement of either one-third of the membership of his or her component society or 30 members of his or her component society, whichever is smaller.

CONTRACT RENEWED

The Maryland Commission on Medical Discipline has chosen to continue for up to two years a contract with the Faculty for developing and operating a computer data base to track disciplinary actions against physicians. The computer system is the result of SB 560, passed by the Maryland Legislature in 1986.

A physician masterfile has the name and license number of every licensed physician in Maryland. It monitors all hospitals where each physician has privileges or has employment. Under the provisions of the law, the masterfile will soon begin to track all nursing homes, HMOs, and allied health facilities where each physician has privileges or has employment. Connected with this physician masterfile are two additional files, one related to disciplinary actions against a physician by hospitals or allied health facilities, and one that follows malpractice actions against physicians.

The Faculty's Information Services Department is developing and operating this system until the Commission has staff, equipment, and funding to take it over. It is anticipated this will occur in about eighteen months.

WORKER'S COMPENSATION COMMISSION

Effective July 1, 1987, Maryland law requires physicians to use the AMA's Guidelines to the Evaluation of Permanent Impairment for all evaluations of permanent impairment under Worker's Compensation. Evaluations submitted to the Commission are required to include statements as to pain, weakness, atrophy, loss of endurance, and loss of function.

Guidelines to the Evaluation of Permanent Impairment can be obtained by writing: American Medical Association, #OP254, P.O. Box 10946, Chicago, IL 60610. The cost is $27.50.

BC/BS DIAGNOSTIC TESTING GUIDELINES

Several Resolutions were considered by the AMA House of Delegates during its June 19-25 meeting calling for AMA action on these national guidelines. The AMA will act to delay the implementation of the guidelines and will provide an assessment to the National Blue Cross and Blue Shield Association as to how the guidelines will compromise the provision of quality patient care.

The Faculty maintains an Ad Hoc Committee to study these guidelines with Marvin Schneider MD as Chairman. Further information may be obtained from Michael Murray at the Faculty office.

AMA REPORT ON AIDS

The AMA has approved a far-reaching report calling for specific recommendations aimed at preventing or controlling AIDS. This widely publicized report addresses the AMA's concern that there be a judicious balance between the well-being of HIV-positive patients and the protection of the public health. The report emphasizes that physicians should assume a leadership role in educating themselves, their patients, and the public.

The report specifically calls for (1) Mandatory testing for the AIDS virus for donors of blood and blood fractions, organs, and other tissues intended for transplantation in the US or abroad, for donors of semen or ova collected for artificial insemination

or invitro fertilization, for immigrants to the US, military personnel, and prisoners in state and federal institutions. (2) Voluntary testing should be provided regularly for patients who are from areas with high incidence of AIDS or who engage in high-risk behavior requiring surgical or other invasive procedures. If the voluntary policy is not sufficiently accepted, the hospital and medical staff should be prudent to consider a mandatory program for the institution.

AMA MASTER-FILE

Med-Chi has been selected by the AMA as the first medical association to have on-line access to its Physician Masterfile. The Master file contains records on more than 550,000 US physicians. All information in the Masterfile has been verified by primary sources and includes information on licensure, current and past addresses, medical school, graduate training, specialties, and for foreign medical school graduates, ECFMC certification.

The Faculty was selected as the first state for this on-line access because of its experience and expertise in developing and operating physician-based data bases, especially the Maryland Commission on Medical Discipline Data System and the Unique Physician Identifier System for the Maryland Health Services Cost Review Commission.

Access to the Masterfile will improve many Faculty operations. Peer review committees will have immediate access to verified information about a physician's training and license history. The Membership Department will be able to verify name and address changes.

BREAST CANCER LAW

Effective July 1, 1987, physicians who treat breast cancer patients must comply with new informed consent requirements as a condition of licensure. Under the new legislation, a physician must educate his or her patients of alternate forms of treatment before beginning any treatment of the cancer. This requirement is met by providing to the patient (within 5 days of treatment) an informational pamphlet (provided by the Department of Health) and by having the patient sign a receipt form (also provided by the Department of Health). The legislation exempts treatment that must be provided immediately in order to save the patient's life.

By now, every physician in Maryland should have received information from the Department of Health that explains this new requirement and contains an order form for the pamphlets and receipt forms. If you treat breast cancer patients and have not received this information, contact Ms. Ginny Gaumer or Mr. Kim Wilson at 225-6774 immediately.

Once again, effective July 1, 1987, physicians who treat breast cancer patients must comply with the new informed consent law. For your own protection, be sure to file completed receipt forms in the patient's medical record.

LIABILITY INSURANCE ALERT

The Insurance Commissioner's Office has informed us that a Cease and Desist Order has been issued against Casualty Assurance Risk Insurance Brokerage Company. The Commissioner's office advises that this company is not authorized to transact business in Maryland and that no guarantees can be made about either the company's

liquidity, product quality or ability to satisfy claims. Physicians who enter into contracts of insurance with this company do so at their own risk.

CANCER MANAGEMENT PUBLICATION

The Drug Information Division of the United States Pharmacopeial Convention is developing a new publication on unorthodox/unproven methods of cancer management. The Convention seeks input from medical professionals with an interest in unorthodox cancer treatment or health fraud in general. Interested persons should contact the USP at 12601 Twinbrook Parkway, Rockville, MD 20852 (301-881-0666 extension 222).

CDC GUIDELINES

The Centers for Disease Control (CDC) has issued guidelines regarding the disinfection/sterilization of endoscopes following their use on patients infected with the human immunodeficiency virus. To properly decontaminate these endoscopes, these CDC guidelines should be followed. The use of glutaraldehyde or other such solutions should be employed; other means of disinfection/sterilization may be ineffective.

Previously, some endoscopes were being cleaned between use with common household detergents. If a patient known to be infected with human immunodeficiency virus was colonoscoped prior to colonoscopies being performed on other patients, there is a potential for considerable exposure.

SEMIANNUAL MEETING

The next Semiannual Scientific Meeting will be held in Maui beginning January 26, 1988, with optional extensions to Waikiki and San Francisco. Meeting in Maui at the luxurious Westin Maui Hotel on Kaanapali Beach, the Semiannual Scientific Meeting will feature up to 24 Category I CME credits, social activities, optional tours, Auxiliary activities, and the finest accommodations on the island. Westin's Pink Palace will open in August 1987, after $155 million renovation. It is a showplace of natural and man-made beauty, with gardens, waterfalls, magnificent coastlines, and unmatched tropical settings over 12 acres. The hotel is located next to the 36 hole Royal Kaanapali golf course.

Papers on topics of general interest are being solicited from members. Contact Mary McGibbon at the Faculty office for a copy of the Advance Program or additional information about the "Call for Papers."

Angelo J. Troisi
Executive Director

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Executive Committee and Council Actions

Executive Committee—February 12, 1987

• **Breast Cancer Pamphlet** The Committee considered a request from the DHMH for (1) a Med-Chi representative to serve on an advisory board to implement SB 30 (Physicians—Information on Breast Cancer) and (2) authority to use Med-Chi's breast cancer pamphlet for distribution to the public. The Committee authorized the president to appoint a representative to the advisory committee, granted use of our pamphlet by the DHMH with the stipulation that the tear-off sheet be removed before distribution, and agreed to furnish copies of the pamphlet.

• **Maryland Health Fair** The Committee approved the request of the Maryland Health Fair, Inc. for a letter of endorsement for "Maryland Health Fair Month," March 20 through April 11, 1987.

• **Resolution on Smoking** A resolution from the Center for Health Education, for approval and presentation to the AMA House of Delegates, was tabled for further information. Its need was questionable since the AMA has stated a position for a smokeless society before the year 2000.

• **Emergency Medical Services (EMS) Committee** Peter Fahrney MD discussed his committee's recommendations regarding emergency prehospital care. Presenting a summary of the availability of Basic Life Support and Advanced Life Support units throughout the state, he described the Maryland EMS as optimal although several rural areas do not have advanced life support levels.

Michael R. Dobridge MD, Council Chairman, reaffirmed the Faculty's full support of the entire EMS. Dr. Fahrney requested development of EMS enhancement through Med-Chi and further suggested that the Faculty should recognize and support each activity.

Discussion ensued regarding fiscal expenditures for substantive training needs of prehospital personnel, particularly endotracheal entubation. Montgomery County was cited as a leader in such training through use of fresh cadavers. Ms. Wood said the Committee on Professional Ethics is developing a standard on this practice.

Dr. Fahrney was excused from the meeting with direction that this matter should receive further consideration by the Emergency Medical Services Committee.

• **Management Services** Dr. Yosuico presented the report of the Finance Committee on formation of the Management Services Corporation. Following discussion, a motion was made and seconded to proceed with this proposal.

• **Public Relations Plan** James E. Bell MD, Chairman of the Public Relations Committee, presented an overview of 1986 activities, public relations goals and objectives for 1987–88, and a budget of $10,900. Objectives requiring funds included development of a Citizenship Award, creating a Med-Chi logo, and implementation of the Media Awards Program.

The Executive Committee approved the plan, but directed Dr. Bell to bring to the Committee those items requiring funding prior to implementation. Dr. Bell explained that funds to develop the logo would be needed soon; the Committee then approved $2,500 for creation of a Med-Chi logo.

Dr. Dobridge congratulated Dr. Bell and the Public Relations Committee for developing such a comprehensive plan.

• **O'Donnell v. McGann Amicus Brief** The Committee approved the filing of a brief as *amicus curiae* in this case that involved the posting of a supersedeas bond pending appeal in a malpractice judgment exceeding the insurance limits. Judith Wood, Faculty legal counsel, will be filing the brief.

Council—February 12, 1987

• **Approval of Minutes** Council approved the following minutes as submitted.

Executive Committee, November 20, 1986
Council, November 20, 1986
Executive Committee, December 18, 1986

• **1987 Budget** The Treasurer, Dr. Jose Yosuico, presented the proposed 1987 budget, which, following discussion was adopted as recommended by the Executive Committee.

• **Center for Health Education** George S. Malouf MD, who serves on the Board of Directors of CHE, briefed Council of proposed bylaw amendments that, if adopted, would make CHE self-sufficient and independent of financial assistance from Med-Chi and from Blue Cross/Blue Shield. Council approved the bylaw amendments as submitted.

• **Oath of Office** Dr. Lewers explained that a presidential oath of office was prepared because it is a formality followed by most state and county medical societies. Council reviewed the proposed oath and agreed it should be administered annually by the outgoing president during the second meeting of the House of Delegates at the Annual Meeting.

• **Dues Waivers** Council approved waiver of 1987 dues for the following at the request of the component society indicated:

Montgomery County	William D. Daniels MD Potomac (medical disability)
Wicomico County	Chester C. Collins MD Salisbury (illness)

• **Emeritus Members** Council approved the following retired members for emeritus membership at the request of the component society indicated:

Allegany County	G. Overton Himmelwright MD Cumberland
Anne Arundel County	Robert Dabolins MD Glen Burnie
	Thomas E. Reichelderfer MD Annapolis
Baltimore City	Francis F. C. Chang MD Baltimore
	John R. Hankins MD Baltimore

	Louis E. Queral MD Baltimore
Carroll County	Rita M. Glahn MD Woodbine
	Howard E. Hall MD Sykesville
Dorchester County	J. Edwin Fassett MD Cambridge
Montgomery County	A. Dement Bonifant MD Olney
	Joseph A. Dugan MD Rockville
	Joseph M. O'Neil MD Rockville
	James S. Stanton MD Rockville
Prince George's County	Paul Chen MD Accokeek
	John Cosma MD Bowie
	Blanca A. Gimenez MD Adelphi
	Man J. Yoon MD Potomac
Talbot County	Edgar Bering MD Easton
	Eugene H. Guthrie MD Easton
	John I. Knud-Hansen MD Easton
	Gibson A. Packard MD Easton
Washington County	Richard T. Binford MD Hagerstown
	Frederick D. Dove, Jr., MD Hagerstown
Wicomico County	G. Herbert Sembly MD Salisbury
	Andrew C. Mitchell MD Fruitland

• **Management Services Corporation** Dr. Yosuico presented the proposal of the Finance Committee to establish the Management Services Corporation. Following discussion, a motion to establish this corporation was adopted unanimously.

• **Update on IPAs** Leon E. Kassel MD, Chairman of the Task Force, reported on proceedings of this committee. Meetings have been scheduled with the Faculty's consultant, Judith Mattson, Inc., for a report and recommendation to Council on March 19, 1987.

• **Public Relations Plan** Upon recommendation of the Executive Committee, Council approved the 1987–88 Public Relations Plan under the condition that items requiring monetary expenditures be reviewed by the Executive Committee prior to implementation to guarantee funds are available. Council approved $2,500 for development of a new Med-Chi logo.

Dr. Dobridge asked that Council express its appreciation to the Public Relations Committee, its chairman, Dr. Bell, and the staff for their excellent work.

• **Peer Review** Following regular business of the Council, Marvin Schneider MD raised the issue of review of health claims arbitration matters upon referral by the Commission on Medical Discipline. Following discussion, Dr. Kassel, speaking on behalf of the Commission, said guidelines for such review will be provided soon; Dr. Schneider expressed urgent need for them. Mr. Troisi indicated a meeting of medical society executives will be convened for action on this important issue.

Executive Committee—March 19, 1987

• **Peer Review Foundation** Emidio Bianco MD, Chairman of the Peer Review Committee, proposed a concept for a statewide peer review foundation. Dr. Lewers indicated that third-party organizations, specifically Blue Cross and Blue Shield of Maryland, Inc., plan to initiate quality review activities and may do so with involvement of the Faculty.

The Executive Committee accepted this Task Force report and directed that the concept be studied further. Additionally, membership of this study committee should be enlarged to include wider representation.

• **Resolution on Smoking** Albert M. Antlitz MD explained that this resolution was at the request of Charles Herman MD (from the AMA Council on Medical Education), who has wanted to implement such a resolution for some time. A motion was made and adopted to approve the resolution (if it is not already AMA policy) with the recommendation that it be considered by the Faculty's AMA Delegation prior to submittal to the AMA House.

• **Physician Identifier Number** The Committee considered recent correspondence from members and from the Maryland Hospital Association indicating the possibility of misuse of the physician identifier numbers. Following discussion, staff was directed to communicate with Dick Davidson of the MHA, expressing the Faculty's objections and requesting that hospital administrators be notified of the legal protections afforded by law to the confidentiality of the physician's name. Staff was also directed to develop a system that may prevent such misuse.

• **City Council Bill 1493** The Committee discussed the request of the Committee on Alcoholism and Dependency for Med-Chi support of City Council Bill 1493 that would provide funds for warning signs on the use of alcohol. Mr. Troisi stated that Baltimore City Medical Society had no objection to Med-Chi being involved in this matter. A motion that Med-Chi support this bill was adopted.

• **Update on Task Force on IPAs** Dr. Kassel reported on recent activities of this task force, and the Committee discussed the options available.

• **Small Areas Practice Variation** Dr. Kassel reported on the statewide study of variations in medical experiences throughout the Maryland population. He noted that a meeting has been scheduled for consideration of data involving variations pertaining to coronary bypass surgery among Maryland residents.

• **Project CHAT Update** Michael Murray, Med-Chi's Director of Operations, briefed the Committee on the AMA-initiated Congressional Health Awareness

Tours (project CHAT), designed to educate members of Congress on the provision of medical services by radiologists, anesthesiologists, and pathologists. The Committee concurred this would be useful and directed staff to coordinate such activity through the component societies.

• **Shoppers' Fee Guide** Joseph Jensen reported on the status of the Maryland Attorney General's *Guide to Doctors' Fees in Maryland.* Faculty staff has met with two representatives from the Attorney General's (AG) office to discuss the findings of the Faculty's survey on the accuracy of the data. The AG's staff is now considering publishing 1986 Medicare data as a fee guide. In the meantime, the AG has asked for Faculty advice on appropriateness and usefulness of a guide based on Medicare data. The position adopted was that as presently constructed this guide would not be helpful in selecting a physician and would, in fact, be a disservice to the population.

• **Magan Case—Amicus Brief** Judith Wood advised the Committee that briefs filed to date in this case indicated the question of underwriting standards is no longer the issue in this appeal; sufficient administrative procedural errors may have occurred to preclude a review of the issue of underwriting standards.

• **Meeting Between Med-Mutual and *Journal* Editorial Board** Minutes of a recent meeting between Med-Mutual and the *Maryland Medical Journal's* editorial board were received for information only. Further discussions will be held to clarify the responsibility and authority of the *Journal's* editorial board.

• **Maryland Health Convocation** Correspondence from the Maryland Health Convocation requesting support of their 1987 program was received. During discussion comments were made about the negative feelings of legislators as well as of some members toward Med-Chi's involvement. There was also discussion of the perception that if Med-Chi did not participate the action might be deemed political. It was moved and approved to contribute as a full sponsor and to transmit this contribution in the spirit of supporting the Convocation.

• **Auxiliary Request for Funds** Mrs. Nancy Howell, President of the Auxiliary, informed the Committee of anticipated expenses for a reception for Mrs. Mary Strauss, who will become President of the AMA Auxiliary in 1988. The Committee approved $2,500 for this purpose with the anticipation that the Auxiliary may return to the Committee with another figure if additional funds are needed.

• **Annual Meeting: George Will's Contract** The Committee discussed the speaker for the Plenary Session for the 1987 Annual Meeting. George Will, nationally known orator and writer, had agreed to speak for $9,000 for an hour. Members expressed concern about what they thought was an exorbitant amount but, due to time constraints, voted to engage Mr. Will.

• **Support for Legislation on Liability Package** After debate of a proposal by Dr. Lewers to place ads in newspapers around the state to appeal for public support of the Governor's liability package, the Committee authorized expenditure of up to $10,000 for this purpose, provided the Governor's office agrees this is the best way to get support. Gerard E. Evans, Med-Chi's Director of Government Relations, will pursue this with the Governor's office and respond to Mr. Troisi on the acceptability of this concept.

• **Alliance of State Physician Networks** At Dr. Lewers' request, the Committee authorized travel expenses for Dr. Kassel to attend the meeting of the Alliance on April 28, 1987 in Atlanta with Dr. Lewers.

• **Physician Rehabilitation Letter** Committee members reviewed a draft letter but declined to sign it unless wording relating to expenditure of funds was changed. Staff was directed to present the letter to the Chairman, Michael G. Hayes MD for his opinion; if he perceived the letter as clarifying this matter, it would be signed and mailed.

Council—March 19, 1987

• **Dues Waivers** Council approved 1987 dues waivers for the following at the request of the component society indicated.

Baltimore City	Patricia A. McIntyre MD (medical disability)
Baltimore County	William A. Rinn MD Towson (medical disability)
	Ellis Turk MD Baltimore (financial hardship)

• **Emeritus Members** Council approved the following physicians for Emeritus membership in the Faculty at the request of the component society indicated (all retired):

Anne Arundel County	Gustavo Delgado MD Annapolis
Baltimore City	Thomas E. Fox MD Baltimore
	Norman R. Freeman MD Baltimore
	Henry J. Houska MD Baltimore
	Benjamin B. Lee MD Ellicott City
	Kurt Seiffert MD Baltimore
Baltimore County	John J. Krejci MD Lutherville
Carroll County	Sherman Chang MD Westminster
Montgomery County	Robert R. Cross MD Rockville
	John E. Everett MD Kensington
	Harry J. Kicherer MD Pinehurst, NC
	Thomas F. O'Connor MD Bethesda
	Gordon S. Rosenberger MD Rockville
	Ejnar Vinten-Johansen MD Rockville

Arthur F. Woodward MD
Rockville

• **Review of Minutes** A discussion of the responsibilities and relationships between the Executive Committee and the Council led to consensus that while approval of the minutes of one body should be done only by that body, such minutes are to be presented to the Council, not for approval or disapproval, but as a report of actions taken. Further, it was stated that Council retain the authority to address such actions taken and so modify as they deem appropriate.

• **IPA Task Force** Dr. Kassel provided an update of activities. Judith Mattson, IPA consultant, then presented the three final options considered by the task force and discussed various recommendations. Ms. Mattson and Dr. Kassel responded to questions regarding financing, implementation, risk, and practicality of creating a service company. After much discussion council moved to table the recommendation for further study.

• **Legislative Report** Israel Weiner MD and Gerard Evans reported on the activities of the legislature, specifically, the collateral source and the mandated assignment bills, then responded to questions.

Dr. Malouf moved and the motion was carried to ask hospitals to request their staff members, physicians, and patients to sign letters to support this tort reform and other emergency efforts. David Nagel MD made a motion that the Executive Committee bring to Council a recommendation on Med-Chi's future relationship with MMLR.

Executive Committee—April 16, 1987

• **Advisory Board on Hospital Licensing** The Committee approved submittal of these nominees (and any additional nominees from the Baltimore City Medical Society) for possible appointment to the Advisory Board on Hospital Licensing:

Zorayda Lee-Llacer MD, CCM, Clinton
Vijayan Charles MD, GS, Bladensburg
Vincent O. Casibang MD, GS, Bowie
Jose Martinez MD, NM, Fallston
Benjamin Maldonado MD, GS, Upper Marlboro
Suresh C. Gupta MD, IM, Mt. Rainier
Nelson G. Goodman MD, IM, Bowie

• **Ad Hoc Policy Advisory Committee on AIDS** The Executive Committee approved a statement recommended by this ad hoc committee, which would incorporate AIDS education into public school curriculum beginning at third grade level and in concurrence with the Surgeon General's report on AIDS:

> The Physicians of Maryland strongly encourage all school boards of Maryland to incorporate AIDS education into their curriculum beginning at 3rd grade level in concurrence with the Surgeon General's report on AIDS. We believe it is in the interest of the health of citizens of this State and we stand ready to assist in the development of such curricula.

This matter will be referred to the Council and to the House of Delegates for consideration on April 29.

• **Med-Chi Representation on Med-Mutual Board** After discussion of the composition of the Board of Medical Mutual and Med-Chi's representation on it, Mr. Troisi reported that 65 members of the Montgomery County Medical Society nominated him to serve on the Med-Mutual Board, but if the Committee had any objection, he would withdraw. Following discussion, the Committee voted to interpose no objection for the name of the CEO to be introduced as a candidate for a position on the Med-Mutual Board.

• **Task Force on Membership** Thomas Collier MD, Chairman, reviewed the plan of the task force. In discussion it was pointed out that on page 6, Item D, "directing" should be changed to "suggesting" as Med-Chi does not "direct" component societies to do various tasks. Dr. Collier explained that this issue was considered by the task force and the word chosen because component societies need to be directed at times to accomplish certain goals. Another issue questioned was the small percentage of academic physicians reported as members of Med-Chi (10 out of 243). It was determined that "academic" needs to be clarified as well as the reported numbers.

The Committee moved to accept the report for review by staff for further recommendations before forwarding to Council at its May 21 meeting. The task force will continue its activities until it is established as a full committee of the Faculty

• **IPA Activities** Dr. Kassel, IPA Task Force Chairman, reported that the task force has not reconvened since the March 19, 1987 Council meeting, but that additional materials aimed at more clearly representing the activities and the recommendation of the task force have been prepared; these will be included in the April 29 Council agenda.

Dr. Kassel mentioned a recent meeting between Med-Chi staff and Chuck Stevens, Executive Director of the Maryland Foundation for Health Care, indicating the possibility for some joint activity between the two organizations. Discussion is still in the preliminary stages.

The task force will seek more time to study the IPA issue. Additional expense (consultant fees) will not accrue without informing the Council in advance. A new chairman of the task force has not been appointed.

• **Physicians' Fee Guide** A copy of the letter from the Executive Director to the Attorney General regarding the proposed Physicians' Fee Guide was accepted as information.

• **Meeting with Office on Aging, DHMH** Mr. Troisi reported meeting with Rosalie Abrams, Director of Office on Aging. After discussion, the Committee concurred that liaison with the Office on Aging and other groups representing the interests of senior citizens should be established.

• **Maryland Health Convocation** At the request of the Chairman, action taken by the Executive Committee (March 19, 1987) regarding Faculty support of the Convocation was reconsidered. The Chairman read a letter from Larry Young in which he requested to meet

with the Executive Committee to resolve any differences and to discuss the future of health care in Maryland. It was suggested that a meeting be scheduled with Mr. Young, the Executive Committee of the Legislative Committee, and representatives of the four major component societies. The meeting will be scheduled prior to the April 29 meeting of Council, at which time the Council will consider this issue.

• **Public Image Campaign** Mr. Troisi reported on the image campaign being conducted in Western Maryland. He stated the original plan excluded Garrett County, but it was included with only a short delay.

• **After Action Meeting** The Chairman proposed that an "after action" meeting be held to discuss how to improve communications within Med-Chi on legislative issues in preparation for the 1988 General Assembly. A meeting will be held in May, and component societies will be notified of the date.

• **Blue Cross/Blue Shield Diagnostic Testing** The Committee reviewed the national guidelines on diagnostic testing recently released by the Blue Cross/Blue Shield association and the American College of Physicians. After discussion the Committee decided to refer this matter to Council with recommendation that the guideline be accepted.

• **Breast Cancer Awareness Day** The Committee approved the request of the Montgomery County Medical Society for $500 in support of Breast Cancer Awareness Day to be held May 2, 1987 in Kensington.

• **Med-Chi Relationship with MMLR** Following discussion of Med-Chi's past relationship with MMLR and their recent correspondence, the Committee directed that a letter be sent to MMLR thanking them for our past relationship, based on the assumption that MMLR is dissolving their organization.

• **AA Meetings** The Committee endorsed the continuation of AA meetings held within the Faculty Building.

• **Blue Cross/Blue Shield "Caring Program"** The Committee received information on the recently enacted "Caring Program" initiated by Blue Cross/Blue Shield of Maryland and involving health care coverage for children falling into the uncompensated area. Concern was expressed that this program will cover only Baltimore City and the five surrounding counties, not the entire state. There was also concern as to what level of specialty care would be covered: surgical, psychiatric, etc. Staff will pursue these issues prior to an initial meeting with Blue Cross/Blue Shield on April 24.

• **Annual Meeting—Registration Fee for Nonmembers** The Committee adopted the following recommendations submitted by the Committee on Scientific Activity regarding registration fees for nonmembers for the 1987 Annual Meeting:

1. Med-Chi Members—no charge
2. Nonmember Physicians—Wednesday lunch, complimentary parking three days, up to 15 hours Category I CME credits—$100
3. Nonmember Physicians—no lunch or parking, but $10 per CME credit for those who wish to attend less than 10 credit hours
4. Nonmember Physicians—no lunch, no parking, no CME credits—no charge
5. Allied Health Personnel and Others—Wednesday lunch, parking—$15
6. Allied Health Personnel and Others—no lunch, no parking—no charge

• **Unique Physician Identifier Number** The Committee accepted as information a letter from the Executive Director to the Executive Director of the Health Services Cost Review Commission regarding the unique physician identifier numbers and a proposed system for maintaining the confidentiality of physicians identities. HSCRC has indicated they will adopt the proposed system.

• **Health Policy Agenda** Dr. Lewers reported that the AMA's Health Policy Agenda has requested that contact be made with physicians throughout the state to inform them of the activities of the HPA. He suggested that Roland Smoot MD, Med-Chi's representative to the HPA, form a committee to carry out this responsibility.

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Medical Miscellany

Before Telephone Communication

Have you ever wondered how you could save time while improving service and treatment to your patients? Lack of time always has been one of the great bugaboos of most physicians, usually causing a loss of sleep and at times, of temper.

The *Medical Gazette* for December 12, 1881 had an interesting article on time saving and on how it can be and is being done. The method could still be used under certain circumstances. The article is quoted in its entirety:

Pigeons as Messengers for Physicians

A late number of the *New York Times* says that:

"A physician of Erie, Pennsylvania, is training homing pigeons for use in his practice. Some of his young birds put upon the road to make record for distance have made very good time, viz, 50 miles in 90 minutes, 66 miles in 82 minutes. Homing pigeons are largely used by country physicians both here and abroad. One doctor in Hamilton County, N.Y., used them constantly in his practice, extending almost over two townships, and considered them an almost invaluable aid. After visiting a patient he sends the necessary prescription to his dispensary by a pigeon; also any other advice or instruction the case or situation may demand. He frequently also leaves pigeons at places from which he wishes reports of progress to be dispatched at specified times or at certain crises. He says he is enabled to attend to a third more business at least through the time saved to him through the use of pigeons. In critical cases he is able to keep posted by hourly bulletins from the bedside between daylight and nightfall, and he can recall case after case where lives have been saved which must have been lost if he had been obliged to depend upon ordinary means of conveying information."

JEAN-MAURICE POITRAS **MD**
Baltimore

Notice to All Physicians

The private physician being one of the major sources that refers patients to the Kennedy Institute for Handicapped Children, let it be known to all concerned that the Kennedy Institute complies with Title VI of the Civil Rights Act of 1964 in that all admissions treatments, and accommodation assignments, to both inpatients and outpatients, are made without regard to race, color, creed, or country of national origin. Furthermore, no applicant for employment, either professional or nonprofessional, shall be denied employment on the basis of sex, race, age, creed, color, nor handicap in any job for which they are qualified.

• • •

Consumer's Guide to Exercise Classes

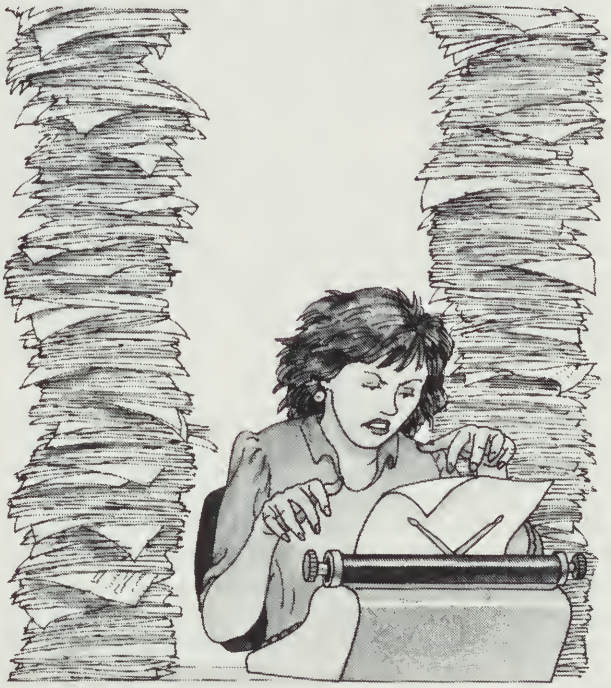
The Maryland Commission on Physical Fitness recently published a new pamphlet, *The Right Class for You—A Consumer's Guide to Exercise Classes*, that provides guidelines to help the consumer select healthy and safe exercise classes. Physicians who would like quantities of the pamphlet for display in their waiting rooms may contact Linda Vanderhoff, Executive Director of the State of Maryland Commission on Physical Fitness, 201 W. Preston St., Baltimore, MD 21201 (301-225-5888).

We invite your comments as well as scientific articles. Write
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Hypertension in Pregnancy II

JOHN T. REPKE MD

Preeclampsia (pregnancy induced hypertension) is one of the three leading causes of maternal mortality in the US. The conclusion of this two-part series presents definitions, diagnosis, and treatment of preeclampsia; eclampsia; and postoperative and postdelivery management.

Dr. Repke is Assistant Professor, Department of Gynecology and Obstetrics, The Johns Hopkins Hospital and School of Medicine, Baltimore.

The previous article identified some of the current concepts regarding etiology, epidemiology, and pathophysiology of pregnancy induced hypertension. In this segment, we discuss the management of preeclampsia and eclampsia.

Hypertensive disorders complicating pregnancy have been defined by the Committee on the Terminology of the American College of Obstetricians and Gynecologists as follows:

Hypertension: systolic blood pressure ≥140 mm Hg; diastolic blood pressure ≥90 mm Hg; or a systolic increase of 30 mm Hg, diastolic increase of 15 mm Hg.

Proteinuria: >300 mg/1/24 hours or >1 gm/1 in at least two random urine specimens six or more hours apart.

Preeclampsia: development of hypertension with proteinuria, edema, or both after the 20th week of gestation.

Eclampsia: occurrence of convulsions in a preeclamptic in the absence of any coincidental neurologic disease.

Chronic hypertension: presence of persistent hypertension of whatever cause prior to the 20th week of gestation in the neoplastic trophoblastic disease.

Superimposed preeclampsia or eclampsia: development of preeclampsia or eclampsia in a woman with chronic hypertensive vascular or renal disease.

Gestational hypertension: Hypertension developing in the latter half of pregnancy, not accompanied by other evidence of preeclampsia or hypertensive vascular disease.

Severe preeclampsia: blood pressure >160/110, proteinuria >5 gm in 24 hour, oliguria <500 ccs in 24 hours, or a rising serum creatinine, persisting visual disturbances, epigastric or right upper quadrant pain, pulmonary edema or cyanosis, thrombocytopenia or overt hemolysis, hepatocellular damage, intrauterine growth retardation.

HBP Commentary is contributed by the Maryland Commission on High Blood Pressure and Related Cardiovascular Risk Factors, 201 W. Preston St., Baltimore, MD 21201 (301-225-5891). Editors: R. Patterson Russell MD, Past Chairman; Donald O. Fedder PharmBS, DrPH, Chairman; and Carol Lewis MPH, ScD, Executive Director.

Principles of Diagnosis and Treatment

The most important features in managing the preeclamptic patient are correct diagnosis, stabilization of the patient, and delivery of the infant. An accurate diagnosis is of great importance since other conditions may mimic preeclampsia. The clinician must make sure there is not a treatable underlying disorder accounting for the patient's symptoms. In making the diagnosis of preeclampsia it is usually helpful to hospitalize the patient, although there are situations in which outpatient management of mild preeclampsia may be appropriate.

Laboratory tests that may be of use in managing the preeclamptic patient include a complete blood count with platelet count, serum electrolytes, blood urea nitrogen and serum creatinine, serum uric acid, liver enzyme tests including lactic acid dehydrogenase, serum aspartate amino transferase, and serum alanine amino transferase, as well as alkaline phosphatase. A clean catch urinalysis with microscopic examination is also important, as is a 24-hour urine collection for creatinine clearance and quantitation of urinary protein. A baseline electrocardiogram also may be useful. In certain clinical situations other tests may be helpful in excluding underlying disorders. These would include screening for collagen vascular diseases or other underlying renal, cardiovascular, or hematologic disease.

The major underlying principle of treating the preeclamptic patient is to choose a course of action maximally beneficial to her and the developing fetus that will minimize maternal and fetal-neonatal morbidity and mortality. In some circumstances early hospitalization of the patient until initial evaluation is completed is a prudent choice. In addition to maternal serologic and urinary tests, fetal testing may be initiated. The nonstress test, a preliminary noninvasive procedure using a fetal heart monitor to determine fetal well being, is useful for screening and may be carried out on a daily basis with hospitalized patients. At the Johns Hopkins Hospital, we frequently employ this test on a daily basis because it is noninvasive, and preeclampsia is a dynamic disease capable of changing the fetal status more rapidly than some other conditions (for example, gestational age more than 40 weeks). The oxytocin challenge test also may be useful to screen for uteroplacental insufficiency, as is the biophysical profile. Whatever test is used, it is important that tests be

meticulously followed up and the information used to help create a management plan that will optimize the outcome for both mother and fetus.

Delivery is reserved, in general, for a deteriorating fetal or maternal condition. If the patient develops severe preeclampsia, delivery is indicated regardless of gestational age. Criteria for severe preeclampsia would include thrombocytopenia, elevated liver function tests, jaundice, hemolytic anemia, nephrotic proteinuria (greater than 5 g in 24 hours), persistent hypertension greater than 160/110, visual disturbances, development of eclampsia, and oliguria. Once the decision has been made to deliver, patients are best managed by using magnesium sulfate.

Treatment of Preeclampsia

In the US, magnesium sulfate remains the drug of choice for the prophylaxis against the development of eclampsia,[1] although it is a potentially dangerous drug. It depresses activity at the myoneural junction peripherally and is not an effective hypotensive agent. It is excreted primarily via the renal route and may act synergistically with curarelike drugs. Magnesium sulfate freely crosses the placenta and achieves an equilibrium in the fetal serum.

There are some controversies regarding magnesium sulfate therapy. Donaldson has suggested that magnesium sulfate is a peripheral anticonvulsant and that it has no central nervous system activity.[2] Some additional data by Sibai tends to support this concept;[3] however there is experimental evidence to suggest there is suppression of neuronal burst firing and interictal electroencephalographic spike generation, which tends to support the central action of this drug.[4] Other agents such as diphenylhydantoin have been successfully used as prophylaxis against the development of eclampsia. Such drugs may be helpful in patients with disorders contraindicating the use of magnesium sulfate (for example, myasthenia gravis).

Once a patient has been placed on magnesium sulfate, careful attention must be paid to various physical parameters. Urinary output is carefully monitored by means of a Foley catheter. Magnesium sulfate is then administered intravenously with a bolus of 4 to 6 g. A continuous infusion at 2 to 3 g per hour is usually sufficient to maintain therapeutic levels of magnesium. In patients with decreased renal function, doses may need to be modified. In our laboratory, the therapeutic range for magnesium is 4 to 6 milliequivalents per liter.

In situations where magnesium levels are not readily available, patients may be managed clinically. The patellar reflex will start to diminish at approximately 4 milliequivalents per liter. Evidence of respiratory depression secondary to magnesium toxicity will not usually occur below 10 milliequivalents per liter and cardiotoxicity is a very rare complication, usually not occurring until 15 milliequivalents per liter or higher. Once the patient has been stabilized on magnesium sulfate, management of labor and delivery may proceed along usual obstetrical lines. Vaginal delivery is the preferred route for patients with preeclampsia. However, in certain situations, expeditious delivery by cesarean section is indicated. This is particularly true if the maternal or fetal condition continues to show signs of deterioration and delivery does not seem to be imminent.

The severely preeclamptic patient may have problems maintaining cardiac as well as urinary output. Fluid management in these patients can become quite difficult, and central monitoring of patients may be helpful. Central venous pressure catheters may assist the clinician in the fluid management of the patient with severe preeclampsia, particularly in the face of oliguria. These patients are not infrequently volume contracted, with low central venous pressure readings. In the critically ill patient, monitoring by means of a Swan-Ganz pulmonary artery catheter may be necessary. Such patients should be managed in an intensive care setting.

When the patient has been stabilized, choice for route of delivery must be made: vaginal delivery is preferred. If cesarean section seems likely, selection of the proper anesthesia must be made. In general, epidural anesthesia is the method of choice in preeclampsia[5] provided the patient has normal clotting studies, adequate intravenous access, an arterial line, is capable of undergoing preblock hydration, and is being cared for by an anesthesiology team skilled in the management of epidural anesthesia with slow induction of anesthesia, thus minimizing the risk of hypotension. If these criteria cannot be fulfilled, balanced general anesthesia after appropriate patient stabilization remains the method of choice. Spinal anesthesia should be avoided in preeclampsia patients undergoing cesarean section.

Management of Eclampsia

Patients who experience eclampsia are in an extremely high-risk category. The same principles of treatment apply to these patients: making the correct diagnosis of eclampsia, stabilizing the patient, and effecting delivery. During the course of an eclamptic seizure, maternal hypoxia will result frequently in fetal bradycardia. Attempts at immediate delivery for this indication may result in an adverse outcome for both mother and fetus. Unless a supervening catastrophic event has occurred, appropriate management should consist of maintaining an airway in the mother, ensuring adequate oxygenation of the mother, administration of magnesium sulfate or other antiseizure agent to aid in the treatment of the seizure, and careful fetal monitoring. Usually, after the seizure has abated and if the mother is adequately oxygenated, the fetus will resuscitate itself in the uterus and the fetal heart rate will return to normal. After stabilization of mother and fetus delivery may be accomplished much more safely.

Postoperative and Postdelivery Management

In general, one third of eclamptic seizures will occur after delivery; of those seizures greater than 90 percent will occur within the first 24 hours.[1] For this reason patients on magnesium sulfate should be maintained on it for a minimum of 24 hours after delivery. Usually within this period a brisk diuresis will have occurred with stabilization of blood pressure and reduction of proteinuria, suggesting a successful reversal of the disease process.

Other Considerations

Clinicians must remember that a patient who develops preeclampsia in one pregnancy has a 20 to 25 percent chance of developing preeclampsia in a subsequent pregnancy; that is, multiparity does not necessarily protect the previously preeclamptic woman from its recurrence. Finally, preeclampsia can progress from mild to severe in a very short time. Rapid transportation for severely ill mothers or very premature infants to adequate care will contribute to improving maternal and perinatal outcome in this disease.

Preeclampsia remains one of three leading causes of maternal mortality in the US. It will complicate between 150,000 and 200,000 deliveries in 1987. The importance of recognizing this disease early, establishing a correct diagnosis, stabilizing the patient, and making correct decisions regarding timing of delivery will improve both maternal and perinatal outcome.

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ERRATA: Author credits for the December 1986 *HBP Commentary*, "Smoking Part III: Two Minutes of Your Time: A Guide to Helping Your Patients to Stop Smoking," should have read: Carol S. Haines MD is former Chief, Division of Cancer Control, Department of Health and Mental Hygiene; Carol Lewis ScD is Executive Director and Edna C. Amador MA is Assistant Director of the Maryland Commission on High Blood Pressure and Related Cardiovascular Risk Factors.

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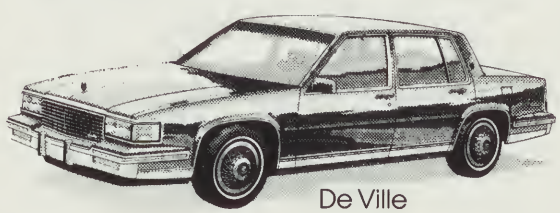
Injection Technique

Editor's Note: This question about the technique for injecting insulin occurred about twenty years ago, but the incident made a lasting impression on me concerning the art of managing a diabetic patient.

When a nine-year-old boy returned for his first office visit after spending two weeks at Camp Glyndon we reviewed the things he had learned at the camp. In going over the technique for making an injection he emphasized that the needle should be inserted into the skin at an angle of 45 degrees and that the beveled edge of the needle with the hole in it should be facing upward. The latter part of this technique was new to me, and I asked the reason for it. Of course, he did not know but he was very certain that it was important because Dr. Silver said it was.

The next time I saw Dr. Abraham Silver, the longtime medical director of Camp Glyndon I asked why he taught that the beveled edge of the needle should face upward when making an insulin injection. He responded that if the child is looking at the beveled edge and concentrating on the technique it takes his or her mind off of the fright and hurt of making the injection. It is a little point that I have found to be very helpful in my years of diabetes management and education.

DeWITT E. DeLAWTER **MD**
Editor



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April 1987, p. 326
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1.	Carpal tunnel syndrome and industry	13
2.	Etiology and prognosis of microcephaly	16
3.	Etiology of premenstrual syndrome	18
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5.	Plastic surgery of the external ear	25
6.	Postoperative pancreatitis	16
7.	Quality assurance, utilization review, and hospital rehabilitation	32
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9.	Thrombosis and parenteral hyperalimentation	16
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If you would like a copy of one of these searches or a search run on any biomedical topic, call or write the library.

SUSAN E. HARMAN
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Area meetings and course announcements are listed each month under *Doctors Take Note*

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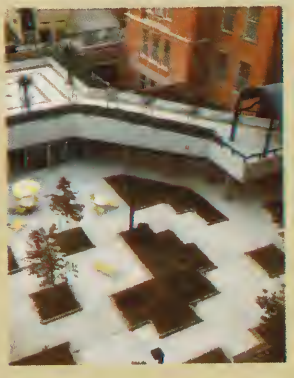
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Masked Depression Revisited

IRVIN H. COHEN MD

Generally the full syndrome of clinical depression is readily recognized. The disorder is characterized by a lowering of mood, a slowing of thought processes and muscular activity, and a variety of "vegetative" symptoms such as anorexia, insomnia, loss of libido, disturbances in menstrual function, and gastrointestinal disturbances. The disorder may range from relatively mild to very severe and may bring about a disruption of personal relationships, disturbances in work capacity, and suicidal inclinations or attempts.

This "textbook" picture is rarely missed by the practicing physician. However, there are many instances in which the patient does not present this full picture. Some patients present predominantly or solely with somatic complaints and may not be aware of low mood. Those who do indicate some degree of low mood ascribe this to the effect of the ongoing, seemingly untreatable physical distress they experience. Such patients may present with sleep disturbance, chronic fatigue, loss of appetite or loss of weight, constipation, loss of sexual interest, or loss of interest in pleasurable activities altogether. They sometimes quote friends or relatives as saying that they have not been their usual lively or energetic self.

The elements commonly missing in such presentations are the sadness, tearfulness, feelings of hopelessness or unworthiness. Hence, such depressions are spoken of as "masked."

In fact, in some cases, the depression may not be totally masked. If the patients are seen frequently and over sufficient duration, many begin to show the other components of depression such as despair, profound discouragement, loss of interest in life, wishes for early death, and even suicidal ruminations. However, in ordinary office medical practice, patients are not seen sufficiently frequently or regularly over the several months it may take for these more hidden aspects to be revealed. Even consultation with various specialists does not bring this out, since each consultant does a cross-sectional assessment and doesn't get to know the patient over time. Hence, for practical purposes, the depression is masked even in this subgroup of "unmaskable" cases.

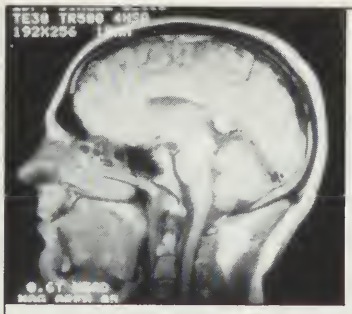
In recent years, chronic pain syndromes sometimes have been considered to be masked depression or depressive equivalents or variants. This concept seems to be supported by the observation that antidepressive medications are often symptomatically helpful. However, it is still not clear whether the antidepressant is helpful because the case is an atypical presentation of depression or whether these medications have a CNS effect in relieving pain independent of their antidepressant activity.

It is useful to consider the possibility of masked depression in patients who present with somatic complaints that do not fit recognizable organic disease patterns and when careful examination reveals no physical cause. Antidepressive treatment often will bring relatively prompt relief in such cases. One such patient had seen various physicians unsuccessfully for several years with complaints of back spasms, abdominal spasm, bloating, pelvic and rectal pressure, lower back pain, and chronic constipation. The patient ultimately developed more characteristic signs of depression. There was a history of prior depressive episodes without somatic complaints. Treatment with nortriptyline (Aventyl, Pamelor) brought about improvement in the depression as well as the preexisting somatic syndrome. Both depression and the somatic symptoms recurred when nortriptyline fell below therapeutic blood levels and cleared up with proper dosage.

Occasional physical syndromes that have been regarded as more closely associated with anxiety than with depression respond surprisingly well to antidepressive medication. A 57-year-old woman suffered severe daily diarrhea due to colitis, a condition which had existed since her high school days. She could not freely go about her activities without daily high doses of Lomotil. She occasionally had bowel accidents while away from home and had taken to wearing pads under her underclothing to protect against embarrassment in public. She had a long history of severe clinically overt anxiety. Ultimately this patient became depressed and was started on low doses of nortriptyline. The depression improved but so did the uncontrollable diarrhea. She was able to stop using Lomotil entirely. The anticholinergic side effect of the tricyclic was perhaps a factor in the symptomatic result, but this factor alone would seem an insufficient explanation in view of the severity of her chronic diarrhea.

There seems, then, to be a complex spectrum of interactions between physical symptoms and affective disorder, ranging from the usual vegetative signs of depression to masked depression to apparent depressive equivalents or variants. While these conditions may respond to treatment with moderate doses of tricyclic medications, these patients often need more than medication and assurance of no serious physical disease. For a time, they may need the support of relatively frequent contact with the physician. The opportunity to relate to and talk to the physician about their feelings may be very relieving. Such patients also may be dependent, clinging, or irritable; it is useful to recognize this as part of the depressive state and not necessarily a permanent trait.

This column is contributed by the Public Relations Committee of the Medical and Chirurgical Faculty of Maryland. We encourage readers to share their thoughts and experiences on the subject. Med-Chi, Public Relations, 1211 Cathedral Street, Baltimore, MD 21201; James E. Bell MD, Chairman; Bernard R. Shochet MD, Editor.



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ad·dict \ ə-'dikt \ *vb* **1 :** to devote or surrender (oneself) to something habitually or excessively **2 :** to cause (a person) to become physiologically dependent upon a drug

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BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR.)*

INDERAL® LA brand of propranolol hydrochloride **(Long Acting Capsules)**

DESCRIPTION. INDERAL LA is formulated to provide a sustained release of propranolol hydrochloride. INDERAL LA is available as 60 mg, 80 mg, 120 mg, and 160 mg capsules.

CLINICAL PHARMACOLOGY. INDERAL is a nonselective, beta-adrenergic receptor-blocking agent possessing no other autonomic nervous system activity. It specifically competes with beta-adrenergic receptor-stimulating agents for available receptor sites. When access to beta-receptor sites is blocked by INDERAL, the chronotropic, inotropic, and vasodilator responses to beta-adrenergic stimulation are decreased proportionately.

INDERAL LA Capsules (60, 80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with INDERAL LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of INDERAL Tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially.

INDERAL LA should not be considered a simple mg-for-mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to INDERAL LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, INDERAL LA has been therapeutically equivalent to the same mg dose of conventional INDERAL as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure and rate pressure product. INDERAL LA can provide effective beta blockade for a 24-hour period.

INDICATIONS AND USAGE. Hypertension: INDERAL LA is indicated in the management of hypertension; it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. INDERAL LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: INDERAL LA is indicated for the long-term management of patients with angina pectoris.

Migraine: INDERAL LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

CONTRAINDICATIONS. INDERAL is contraindicated in 1) cardiogenic shock; 2) sinus bradycardia and greater than first-degree block; 3) bronchial asthma; 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.



WARNINGS. CARDIAC FAILURE: Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or INDERAL should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following *abrupt* discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned, the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (eg, chronic bronchitis, emphysema)—PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY: The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, eg, dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA: Beta blockers should be used with caution in diabetic patients if a beta-blocking agent is required. Beta blockers may mask tachycardia occurring with hypoglycemia, but other manifestations such as dizziness and sweating may not be significantly affected. Following insulin-induced hypoglycemia, propranolol may cause a delay in the recovery of blood glucose to normal levels.

THYROTOXICOSIS: Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol may change thyroid function tests, increasing T_4 and reverse T_3, and decreasing T_3.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case, this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS. GENERAL: Propranolol should be used with caution in patients with impaired hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta-adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be told that INDERAL may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

CLINICAL LABORATORY TESTS: Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS: Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if INDERAL is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

Caution should be exercised when patients receiving a beta blocker are administered a calcium-channel-blocking drug, especially intravenous verapamil, for both agents may depress myocardial contractility or atrioventricular conduction. On rare occasions, the concomitant intravenous use of a beta blocker and verapamil has resulted in serious adverse reactions, especially in patients with severe cardiomyopathy, congestive heart failure or recent myocardial infarction.

Aluminum hydroxide gel greatly reduces intestinal absorption of propranolol.

Ethanol slows the rate of absorption of propranolol.

Phenytoin, phenobarbitone, and *rifampin* accelerate propranolol clearance.

Chlorpromazine, when used concomitantly with propranolol, results in increased plasma levels of both drugs.

Antipyrine and *lidocaine* have reduced clearance when used concomitantly with propranolol.

Thyroxine may result in a lower than expected T_3 concentration when used concomitantly with propranolol.

Cimetidine decreases the hepatic metabolism of propranolol, delaying elimination and increasing blood levels.

Theophylline clearance is reduced when used concomitantly with propranolol.

CARCINOGENESIS, MUTAGENESIS, IMPAIRMENT OF FERTILITY: Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

PREGNANCY: Pregnancy Category C. INDERAL has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. INDERAL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

NURSING MOTHERS: INDERAL is excreted in human milk. Caution should be exercised when INDERAL (propranolol HCl) is administered to a nursing woman.

PEDIATRIC USE: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular: Bradycardia; congestive heart failure, intensification of AV block, hypotension; paresthesia of hands; thrombocytopenic purpura; arterial insufficiency, usually of the Raynaud type.

Central Nervous System: Light-headedness; mental depression manifested by insomnia, lassitude, weakness, fatigue; reversible mental depression progressing to catatonia; visual disturbances; hallucinations; vivid dreams; an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics. For immediate formulations, fatigue, lethargy, and vivid dreams appear dose related.

Gastrointestinal: Nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: Pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: Bronchospasm.

Hematologic: Agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-Immune: In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous: Alopecia, LE-like reactions, psoriasiform rashes, dry eyes, male impotence, and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.

DOSAGE AND ADMINISTRATION. INDERAL LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily. If patients are switched from INDERAL Tablets to INDERAL LA Capsules, care should be taken to assure that the desired therapeutic effect is maintained. INDERAL LA should not be considered a simple mg-for-mg substitute for INDERAL. INDERAL LA has different kinetics and produces lower blood levels. Retitration may be necessary, especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION—*Dosage must be individualized.* The usual initial dosage is 80 mg INDERAL LA once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg once daily or higher until adequate blood-pressure control is achieved. The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

ANGINA PECTORIS—*Dosage must be individualized.* Starting with 80 mg INDERAL LA once daily, dosage should be gradually increased at three- to seven-day intervals until optimal response is obtained. Although individual patients may respond at any dosage level, the average optimal dosage appears to be 160 mg once daily. In angina pectoris, the value and safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS).

MIGRAINE—*Dosage must be individualized.* The initial oral dose is 80 mg INDERAL LA once daily. The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimal migraine prophylaxis. If a satisfactory response is not obtained within four to six weeks after reaching the maximal dose, INDERAL LA therapy should be discontinued. It may be advisable to withdraw the drug gradually over a period of several weeks.

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New Executive Director: New Directions Taken

When Angelo J. Troisi stepped into the role of Executive Director of Maryland's medical society last October, he began his leadership at a time when medical issues facing Med-Chi, the Maryland Legislature, and the public were constantly changing. They still are.

Already Troisi has demonstrated success with the state Legislature. As Senate President Thomas V. "Mike" Miller said at Med-Chi's House of Delegates Annual Meeting in April, "1986 was a watershed year for medical legislation, but it was far surpassed by the 1987 session, for which you can thank Angelo Troisi. You have been well served." He recounted that Troisi persuaded him last November of the crucial importance of medical malpractice tort reform. At mid-session Troisi convinced him to introduce a number of bills as part of the governor's legislative package.

Angelo Troisi is a tall, affable man with an easy grin, a strong handshake, and a quick comment. His solid background in many facets of health care administration include experience as Executive Director of the Prince George's Medical Society, Executive Director of the Maryland Society of Eye Physicians and Surgeons, CEO of several US Army hospitals, assistant professor in health care administration at Baylor University (Texas), and, since 1981, preceptor in the graduate program of health care administration at George Washington University. He is a fellow of the American College of Health Care Executives, a former Chairman of the Board and current member of both the Southern Maryland Health Planning Agencies as well as former chairman of the Board of the Bowie Health Center. He also served twice as Chairman of the Metropolitan Washington Area Council of Health Planning Agencies. He is proud of his service in Vietnam, where he was CEO of a 400-bed hospital. He believes in dedicating himself to whatever task is at hand and doing the best that can be done under the circumstances. Troisi's goal is to "insure that the state medical society represents all Maryland physicians and continues to be the patient advocate and protector of quality health care."

Representing Physicians

Among the many issues Troisi has dealt with in the past several months has been that of maximum allowable actual charges (MAACs) affecting both participating and nonparticipating physicians treating Medicare beneficiaries. This ceiling on charges is part of the Omnibus Budget Reconciliation Act (OBRA) of 1986 and is determined by complicated calculations. AMA took the case to court to enjoin the implementation of that portion of OBRA until physicians had sufficient information on MAACs.

Reacting quickly from the midst of an AMA meeting in Las Vegas last December, Troisi directed staff to immediately survey nonparticipating Maryland physicians to ascertain how many had received the information necessary to calculate their MAACs. Troisi then directed the compilation of the information and the drafting of an Affidavit in cooperation with AMA attorneys to assist in this litigation. Although the AMA was unsuccessful in obtaining the injunction, the litigation did result in concessions from Medicare. Under Troisi's guidance the Faculty staff has established an excellent working relationship with the Medicare administration and thereby has assisted many members in resolving problems associated with this federally mandated requirement.

The 1987 legislative session in Annapolis provided another challenge to organized medicine involving Medicare as a social and economic issue. Introduced by Delegates Paul Pinsky and Anne Mackinnon, HB 892 (Mandatory Medicare Assignment) would have required physicians to accept full Medicare assignment in all cases.



Angelo J. Troisi with Thomas V. "Mike" Miller, Jr., President of the Maryland Senate.



Troisi and Gerard E. Evans, Med-Chi's Director of Government Relations.

Troisi believed this was as damaging to physicians as any piece of legislation ever introduced in Annapolis: "It demanded swift and sure action on the part of the Faculty, and the physicians responded beautifully." Aside from the very capable presence of the Faculty leadership, he arranged for Edward Annis MD, of Florida and former president of AMA, to testify on behalf of the physicians of Maryland. "Dr. Annis is recognized as an eloquent spokesman who debated President John F. Kennedy during the inception of federally mandated entitlement health programs during the early 1960s," Troisi said. "The evening preceding the hearing before the House Environmental Matters Committee, we hosted a dinner for him that was well-attended by representatives of the Governor's office, various committee chairmen of the House of Delegates, and the President of the Senate. He also met with the Governor and Lt. Governor the next morning."

According to Gerard E. Evans, Med-Chi's Director of Government Relations, Troisi has provided the essential constant support and two-way communication between the Baltimore and Annapolis offices allowing Evans to react quickly: "Timing is everything in Annapolis." When Evans needed a physician to testify on a certain matter from a certain perspective, Troisi had the perfect physician in Annapolis the next day to testify. Citing HB 892 Evans described how Troisi was able to muster the forces needed: he knew the appropriate internist—a physician who treated many Medicare patients and thus could address knowledgably the topic of Medicare assignments, was well spoken, and made a good appearance.

Much of what physicians can or cannot do, can or cannot charge is decided by nonphysician legislators in Annapolis and Washington, DC. Therefore, from Troisi's perspective it is extremely important to have an effective voice in Annapolis. He believes that a large portion of what the medical society can accomplish for physicians is representation and cites the fact that 25 to 30 percent of AMA's budget is devoted to that task. An analogy can be made to a symphony where each member must play his or her notes so that the total results in the desired effect.

When HB 252 (Collateral Source Rule) died, some people felt a bit despondent, Troisi, full of boundless energy, said "Let's take something negative and build something positive from it." The vote was 11 to 10. "We only need to change one mind. We only have to work on one person." In fact, three minds were changed.

Troisi played an integral part in every piece of legislation. He sees legislation whittling away at medicine: amputation by inches of different specialties. Even though a particular piece of legislation seems innocuous he foresees the next step. For example, HB 612 (known

around the General Assembly as the 1987 "eye drop" bill) would have allowed an optometrist to administer topical ocular diagnostic pharmaceutical agents if the optometrist were certified to do so by the Board of Examiners of Optometry. The next step would have been outpatient surgery or administration of therapeutic drugs. While this bill has failed in many previous sessions, the Faculty must be poised and ready to respond to a 1988 reintroduction of this same legislation. This is a premier "quality of health care" issue, and it is strongly believed that no amount of oversight by the Board of Examiners of Optometry can replace the years of rigorous medical training received by the ophthalmologists and eye surgeons of Maryland.

Much of Med-Chi's effort in Annapolis is devoted to educating legislators about issues affecting medicine. Troisi said, "If we can get to them (again, it's all in the timing), we generally prevail because we present factually sound information, and it is compelling.

"We are educating legislators, and we are educating physicians about what they can do and how they can get involved in their own districts. There are no better lobbyists than the physicians who live or practice in a legislator's district."

Troisi acknowledges that even with his own credibility, good information, and so forth, he is "nothing compared to a physician saying to a legislator that a bill is no good. The family physician who treats the legislator or his or her relatives has a phenomenal effect when speaking to a legislative issue. Legislators are so responsive to physicians because they know the physician's business is people and most of the time the physician-patient relationship is sterling: patients believe what their physicians tell them.

"We are careful not to abuse the relationship. If we ask a physician to talk to a legislator it's on a matter of great importance. Often, but not always, a physician has to be educated about a particular bill and how it will affect him or her."

Politically, two of Troisi's finest assets are timing and loyalty. The latter comes from growing up in a large, close family; military duty forged both attributes. Troisi's loyalty to physicians on issues of quality health care is evident in his view of medicine as a family. He quotes Benjamin Franklin, "We must all hang together, or assuredly we shall all hang separately."

In April the Faculty made an urgent appeal to Maryland's eight US Representatives urging them to cosponsor House Concurrent Resolution 30 opposing a Reagan administration proposal to modify Medicare reimbursement mechanisms for inpatient services provided by hospital-based radiologists, anesthesiologists, and pathologists (RAPs). The Representatives response to Maryland physicians was remarkable. All but one have



Melvin A. Steinberg, Lieutenant Governor of the State of Maryland with Troisi.



R. Clayton Mitchell, Jr., Speaker of the House of Delegates of Maryland and Troisi.



Decatur W. Trotter (D) District 24, Chairman of the Maryland Legislative Black Caucus, and Troisi.



Alan M. Rifkin, Chief Legislative Officer for Governor Schaefer, and Troisi.

signed as cosponsors of this most important resolution. Currently all of Troisi's energies are centered on defeating this proposal. Resolution 30 will keep Medicare reimbursement mechanisms more responsive to the needs of both patients and physicians, preventing further erosion of the delivery of quality health care and intrusion into the physician-patient relationship.

Another aspect of the "family" view of medicine is Troisi's dedication to Med-Chi's responsibility and authority to carry out thorough professional oversight activity. He vigorously managed the Faculty support of HB 244/SB 235 requiring the Attorney General to assign a full-time Assistant Attorney General to prosecute cases before the Commission on Medical Discipline. The Commission, which functions under the Department of Health and Mental Hygiene, currently has a significant backlog, and this new position should effect the prompt and efficient disposition of medical discipline cases. Currently the majority of the Commissioners are physicians, "as it should be since no one can effect 'peer' review other than a 'peer,'" Troisi said. "If we don't do the job right, it will be done for us. In other states there is a minimum of physician involvement in carrying our physician discipline responsibilities."

According to Michael A. Murray, Director of Operations, the Faculty maintains a major commitment to preserving the highest standards of medical care for citizens of Maryland, "as evidenced by the number of physicians who volunteer their time to four standing committees involved in professional oversight: Peer Review, Physician-Patient Relations, Drugs, and Physician Rehabilitation. Approximately sixty physician volunteer's and eight staff members represent some $150,000 annually that the medical society provides as a service to Maryland's citizens."

Reorganizing for the 1990s

To help strengthen the bonds of the medical family Troisi has begun a realignment of services and personnel within Med-Chi. Staff is slowly changing through normal attrition and gradual reassignment to meet current and future needs, particularly in the area of research and information systems.

Within the office of the CEO, there are plans to expand the Government Relations Department, headed by Gerard Evans, allowing it to become even more responsive to component and specialty societies to include individual physicians. For example, during the 1988 Legislative session members would call to find out the status of a bill or what they might do to contact a particular legislator. The department now has computer capabilities allowing Med-Chi to write individual letters

to each member of a specific Annapolis legislative committee within minutes.

The Public Relations Department, under Nina Casey, has plans for 1987–88 that include improving the public image of the medical profession and establishing credibility in Med-Chi as the resource for accurate and quality health information in Maryland; expanding the Faculty's contacts with the media, who are responsible for supplying the public with information on which they base their views of the medical profession; informing and educating the public on vital health matters; keeping members informed of organizational policy and available Med-Chi services; and educating members on the importance of public relations and of what each physician can do to help improve the image of the profession.

Three directorates are now in place: Operations, headed by Michael Murray; Support Services, under Joseph Harrison; and Health Policies Research and Information Systems, directed by Joseph Jenson.

The Operations Director administers the services that Med-Chi provides to members; most of the committees function through this directorate including the four professional oversight committees, the Committee on Scientific Activity, and the *Maryland Medical Journal.* In addition, Murray serves as liaison with major public and private organizations involved with health care.

Support Services comprise financial management, personnel, billing, membership, mailing lists, and maintenance of the facility.

Under the aegis of Health Policies Research and Information Systems, Jensen supervises the Faculty's Library as well as the total computer system within Med-Chi. Research associate Michelle Burke is involved with health policy analysis and various feasibility studies. Her activities mesh with the Government Relations Department by providing background research allowing the Faculty to respond appropriately when a bill involving health related issues is introduced in Annapolis.

Equipping Med-Chi for the future is of paramount importance to Troisi, and he provides the impetus both within the Faculty and outside the membership through increased liaison with specialty societies. His overall effort is to unite the various political factions existing in organized medicine so they may respond in one voice to overcome the insidious forces in Annapolis or Washington determined to erode the high standards of medical care in this state.

A Personal Note

A native of Raritan, NJ, Troisi lives in Bowie with his wife Terry Ann. Their two sons, Mark John and Matthew Stephen, were captains of the Bowie football team, and their daughter, Noelle Ann, not to be outdone, was cheerleading squad captain. For obvious reasons, one of Troisi's hobbies has been helping the football coaching staff at Bowie High School; although his sons no longer play, he still enjoys the game.

Another hobby centers in the greenhouse Troisi built. He grows many flowers and vegetables, but his pride and joy is a grapefruit tree. Years ago, Troisi paid a morning visit to a friend in the hospital. On the breakfast tray was a grapefruit. Troisi took the seeds and planted them. He nurtured, replanted, and lugged the



Troisi and Bowie High's football team captain.



Troisi's 22-year-old grapefruit tree.



Terry and Angelo Troisi with Governor William Donald Schaefer.

struggling shoot from room to room around the house to find the sunniest spot. Eventually the twig became a tree in a tub, finally becoming so heavy Troisi gave it a permanent spot in the greenhouse. He next project is to import some bees to pollinate the seven-foot tree so it will provide grapefruit for breakfast.

Troisi carries strong memories of his tour in Vietnam. He gives full credit for the 71st Evacuation Hospital's 99 percent save rate to the dedicated doctors, nurses, and enlisted medical technicians who found themselves in Vietnam. "I saw them work 24 to 38 hour shifts saving lives of our soldiers as well as Vietnamese civilians and wounded North Vietnamese troops. The valiant efforts of individual medical staff members were the real stories of Vietnam."

He tells how a Maryland obstetrician delivered Vietnamese twins. The mother was ecstatic, yet her husband was nowhere to be found. Two days later, the proud father appeared and, through an interpreter, profusely thanked all the hospital personnel, especially the doctor. Troisi asked the man why it took so long for him to appear at the hospital. "The Vietcong took us from our village to set up sandbags and to fire mortars and rockets," he replied. Troisi called the infantry, and sure enough, they found the mortars pointed in the direction of the hospital and the nearby air force base. Because our doctor did a good job, a grateful Vietnamese civilian revealed the enemy's position.

Troisi's wife Terry recounts the incident when a US soldier was received in the hospital's emergency room. He had been hit in the thigh by a Chinese communist 75 mm recoilless rifle round that did not detonate. X-rays revealed and the explosive demolitions personnel confirmed that both the round and the spring-activated fuse were intact. The chief physician and Troisi discussed the situation and, because of the risk involved, decided not to order anyone else to perform the surgery: they volunteered to do it themselves.

Since Troisi had been trained as a medical/surgical technician when he was an enlistd man, he volunteered to assist with the surgery. "If we had to lose someone," Troisi affirmed, "the bosses would be the least missed in the operation of the hospital." They wore flak vest and helmets to provide some protection from the explosion and shrapnel in case the round exploded. Two adjacent operating rooms also were prepared for them. Troisi jokingly said he had made arrangements for his personal friend, the best surgeon at the hospital, to insure he took care of Troisi if there was an incident.

There was a happy ending: the removal of the device was accomplished without an explosion. For heroism involving putting his own life in imminent danger, Troisi received the US Army Soldiers Medal. Other military orders include: the Bronze Styar, Meritorious Service Medal, Joint Services Commendation Medal, the Army Commendation Medal, and various others to include two medals from the South Vietnamese Army for his efforts in developing and improving a civilian hospital as well as for teaching hospital administration to the administrative staff of a nearby South Vietnamese Army hospital.

Angelo Troisi is a strong person who will provide strong leadership for the medical community of Maryland.

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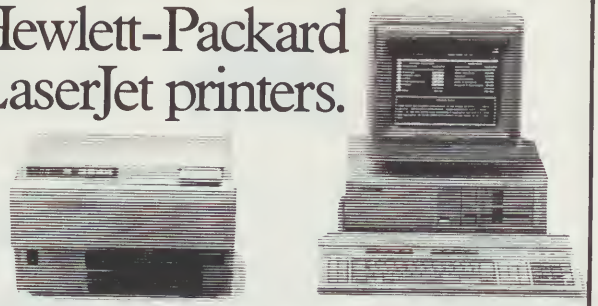
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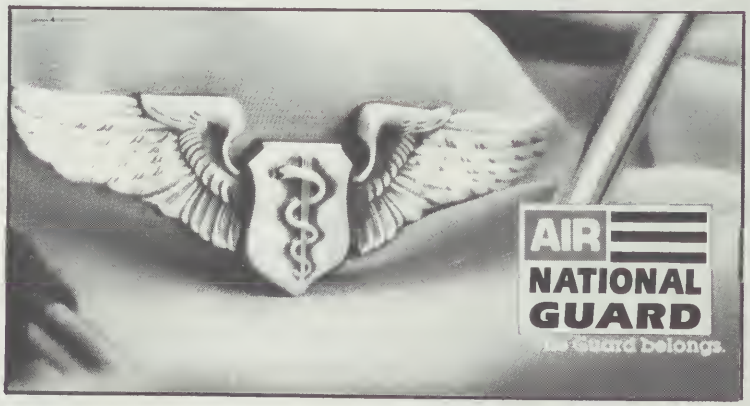
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Contributions to Medicine from Bioavailability Studies

MELVIN SHAROKY MD

The generic drug industry is spending millions of dollars each year on clinical research, and the data gathered from these studies are a rich source of pharmacological information.

Dr. Sharoky is vice-president and chief medical officer, PharmaKinetics Laboratories, Baltimore.

The discipline, technology, and infrastructure of bioequivalency testing has undergone rapid development and sophistication through its increased use by generic manufacturers. This technology offers great promise for new pharmacological and medical insights that might not be obtained from other types of research associated with New Drug Applications (NDAs). Research sponsored by generic firms has resulted in important insights in areas such as:

- racial and age differences in absorption and metabolism of certain drugs[1]
- half-life and inter-subject variability inherent to neuroleptic medications[2]
- side effects of drugs and antidotes[2]
- new and possibly superior formulations of drugs, perhaps leading to new drugs or uses

Dietary manipulations inherent in bioequivalency studies have allowed new approaches to studying certain drugs in more controlled settings.

For the generic formulation of a drug to be approved by the Food and Drug Administration (FDA) through an Abbreviated New Drug Application (ANDA), the drug must be bioavailable and bioequivalent to the innovator's formulation.[3] This bioavailability-bioequivalency research is completed with healthy volunteers through either an in-house laboratory, a university, or contract research centers. Because of the service needs of the generic industry, a small group of qualified, professional, and specialized research centers have been developed that are responsible for protocol design, recruitment of healthy volunteers, control of the environment, development of assay methods to measure drug levels in blood and urine samples, and regulatory affairs. These centers must adhere to good scientific practices and meet the requirements set by the FDA. As a result of this work, initially sponsored by the generic industry, research centers have developed capabilities to perform clinical investigations for all manufacturers in the pharmaceutical industry.

A bioavailability study begins with the recruitment of volunteers. After a complete medical history is taken, a physical examination and a complete battery of laboratory tests are performed to determine which volunteers are suitable. The number of subjects required for a study (between 20 to 30) is determined from what is known about the intra-subject variability for a particular drug: a sufficient number is used to make the study meaningful without using an unnecessary number of volunteers. The subjects remain in a clinical setting similar to a hospital in terms of safety and security, staffed by physicians, nurses, phlebotomists, technicians, and security personnel. Short-term studies may require only in-house observation over two 24-hour periods separated by one to two weeks, while long-term studies may require an in-house stay of seven to ten days. During Phase I, approximately half the subjects receive the reference drug (usually an innovator product) while the others receive the test formulation. During Phase II, the subjects "cross-over" to the drug they did not receive in Phase I. Blood and urine samples are collected at specified intervals and analyzed via assay specific and sensitive methods developed to measure the concentrations of a particular drug or its metabolites. The blood and urine data then are analyzed statistically to compare the test to reference formulations. The results are then compiled and a complete report submitted to the FDA for approval. This entire process is overseen by an institutional review board composed of scientists, physicians, and laypersons who monitor volunteers' safety and risk versus benefit of a particular study.[4]

A controlled environment is necessary to produce an accurate clinical study. The clinic settings in the research centers are designed to reduce variables that may interfere with the ability to observe whether there are differences between the generic and the innovator formulations. For example, meals are controlled to such an extent that not only are all meals identical but also each subject is given each meal at exactly the same time, thus removing food as a variable.

The elimination of caffeine during studies rules out the influence it may have on clinical monitoring as well as on metabolism. Caffeine, a xanthine derivative, would interfere with the assay of another xanthine derivative, theophylline.[5] Also caffeine's known effects on the central nervous and cardiovascular systems would interfere with clinical monitoring of the expected similar effect from theophylline.[6] Caffeine also can increase the basal metabolic rate and act as a diuretic, both of which would interfere with study results.[7]

It is believed that smokers metabolize a wide variety of drugs more rapidly than do nonsmokers, which would generate a difference in plasma levels for smokers and nonsmokers in a particular study.[8] Nicotine screens are used along with history taking to define smokers and

nonsmokers. As a result of bioequivalency studies, plasma levels of different classes of medications are being evaluated to determine if a difference in levels is seen between smokers and nonsmokers. Serum levels of certain drugs as well as frequency of side effects are attributable to subjects' different ages. Restlessness and dystonic reactions seem to have a relationship to age in studies of neuroleptic medications.[2,9]

Information about the effect of race on drug absorption and metabolism is one by-product of these controlled studies. A significant finding is that compared to Caucasians, blacks have lower plasma levels of propranolol as well as the metabolite 4-hydroxypropranolol.[1] This could be responsible for the clinical observation that beta blockers seem to be less effective in blacks than in Caucasians.[10,11] This observation concerning the racial differences has led to the search for differences that may exist with other antihypertensive drugs. That certain medications are not absorbed or metabolized as well in one race versus another would have a major impact on a therapeutic modality chosen for an individual patient.

Many times a generic formulation may be bioavailable but not bioequivalent to the innovator's product and will not meet FDA standards for substitution. There have been instances where generic formulation has not received approval because it was absorbed to a greater extent than the innovator formulation. Bioequivalency testing confirmed that several generic companies were able to produce formulations that showed better absorption and less inter-subject variability than the innovator product but were not submitted for approval because they were not bioavailable. Only through the bioequivalency testing procedures were differences in formulations between the products discovered. To get their formulation of this particular diuretic on the market, one company produced a product with different absorption characteristics than the innovator product. To win approval from the FDA for their product, the company was required to file a NDA and perform clinical trials.

Potassium Chloride Study

Sponsorship by generic manufacturers has enabled a study to be designed to measure the bioavailability-bioequivalence of the innovator potassium chloride versus generic. Potassium chloride offers a challenge because it is a prescribed drug that is a combination of two essential electrolytes. The serum level of potassium is frequently influenced by changing physiologic factors.[12,13] Serum levels of potassium cannot be used to detect small differences between potassium chloride products because of the poor correlation between a dose given and a change in serum potassium level.[12] Therefore, the challenge with the potassium chloride protocol is that assay must be done on urine, and the daily excretion of potassium chloride changes in "normals" on unrestricted diets. Using proper protocol with very strict diet control, baseline low levels of urinary potassium excretion can be established. When potassium intake is at a known constant level accurate predictions can be made on time to steady state, 24-hour urine excretion of potassium, and when a potassium supplement will appear in the urine.[14] The controlled environment and the predictability of potassium excretion in healthy volunteers can be used to study the effects of medications on the excretion of potassium as well as those medications that attempt to spare potassium loss.

The techniques and protocol design also can be applied to the study of the adrenal gland by establishing a baseline of urine collection of not only hormones but also potassium. Renal abnormalities (and any other system that impacts on potassium excretion) can be studied better with knowledge of when a patient is expected to reach steady state, allowing manipulation of their diet or medication with a more predictable response.

Neuroleptic Medications

The generic industry's desire to obtain approval for neuroleptic medications has stimulated research centers to devise safe and effective ways of dosing neuroleptic medications. A protocol design used for the study of generic thiothixene has allowed healthy volunteers to take the medication safely and has produced a vast amount of new information. By designing a study using healthy volunteers, a change can be noted from a normal baseline as opposed to a wandering baseline seen in schizophrenic patients. New and exciting information concerning subject response to medication was uncovered because healthy subjects could answer detailed questionnaires and could volunteer information. It is now known how long and how many doses are required to reach steady state.[2] These studies have led to a better indication of the half-life of the drug and a better understanding of intra- and inter-subject variability of absorption of thiothixene. Subjects are able to articulate what they are experiencing without interference from underlying psychiatric illness. These studies indicate that the prophylactic use of an anticholinergic medication (diphenhydramine, biperidine, or benztropine mesylate) prior to the initiation of neuroleptic therapy will prevent akathisia and either eliminate or markedly reduce the frequency of dystonic reactions.[2]

Psychiatric patients who are unable to communicate on a rational level may have experienced side effects

from the neuroleptic medication and not from their underlying disease.[15] Recognition of a dystonic reaction and of the requirement for an anticholinergic antidote is easily accomplished in a clinical setting.[16,17] However, the subtle and progressive complaint of akathisia is frequently overlooked even in healthy volunteers, until the point of obvious complaint. It would be easy to envision the psychiatric patient with psychomotor hyperactivity whose neuroleptic medication is progressively increased over several days. The ability to differentiate the underlying psychiatric illness from the side effect of akathisia associated with the neuroleptic drug would be nearly impossible. Increasing the neuroleptic medication would worsen symptoms. Prematurely stopping the neuroleptic medication, because of apparent therapeutic failure, might be avoided by the more liberal use of the anticholinergic antidotes.

The frequency of dystonic reactions as well as akathisia in thiothixene studies are diminished when a prophylactic anticholinergic medication is used at the onset of therapy.[2] The marked reduction in both dystonic reactions and akathisia when a prophylactic anticholinergic drug was used in patients receiving thiothixene was impressive and reproducible and should impact the daily care of patients receiving neuroleptic therapy.

Study on Haloperidol

Studies of healthy volunteers receiving haloperidol have resulted in data indicating when to expect subjects to develop dystonic reactions or akathisia. These data will help clinicians better understand the use of this drug. Psychiatric patients are not the only patients who receive haloperidol on a regular basis: it is frequently used to treat elderly patients.[18] These patients placed on haloperidol frequently develop side effects difficult to separate from the underlying illness; the dystonic reaction is more easily recognized as a side effect of the medication while the akathisia may go totally unrecognized as a side effect. The work being done with healthy volunteers may allow more liberal use of anticholinergic medications, which may prevent these problems. This work should stimulate clinical studies of the use of haloperidol in the elderly with and without prophylactic anticholinergic medication to compare any differences attributable to age.

Side effects of medications are frequently difficult to separate from underlying illness. Through multiple studies under controlled conditions we now know more about the frequency and severity of side effects of certain drugs. Postmarketing surveys routinely are being done along with comparison studies of generic to innovator drugs. Reports are generated and sent to the FDA concerning side effects with both the generic and innovator formulations. The well-controlled environment in which these studies are performed allows clinicians to detect subtle changes in laboratory values and behavior unlike the anecdotal side effects with both the generic and innovator formulations. The well-controlled environment in which these studies are performed allows clinicians to detect subtle changes in laboratory values and behavior unlike the anecdotal side effects reported to the FDA. Over 200 healthy volunteers have been dosed with clonidine in a controlled setting, and the percentage that have developed dry mouth, headache, or hypotension can be determined.[19] Since clonidine is not used only for hypertension, it is helpful to know that hypotension in normotensive patients given clonidine can be better defined in relationship to dosing. This will allow clinicians giving clonidine for reasons other than hypertension to inform their patients about the side effects and when to expect them.

To compare the innovator and the generic formulation, each research center must develop blood assay capability. Development of specific and sensitive assays to measure the drug can be applied to research in clinical medicine. A comparison of whether serum levels of the drug correlate with predicted clinical or side effects can be done only if the serum concentrations can be measured. For example, peak serum drug levels of thiothixene do not necessarily correlate with dystonic reactions.[2] It appears that as a subject progresses from zero level to steady state, the highest frequency of dystonic reactions occur.[2] It also has been observed that dystonic reactions occur with no detectable serum drug level of thiothixene.[2] Since the development of these assay methods more clinical research can be conducted on serum drug levels in relationship to therapeutic response and side effects.

Generic manufacturers' desire for approval of their drugs by the FDA has led to the development of research centers conducting scientific and medical trials, and advances in protocol design (developed for generic drug studies) can be applied to other areas of clinical and research medicine. Investigation in the field of bioavailability-bioequivalency has become a valuable source of pharmacological and clinical information applicable to the daily care of patients. The generic industry now has a responsibility to disseminate this new information through scientific publications.

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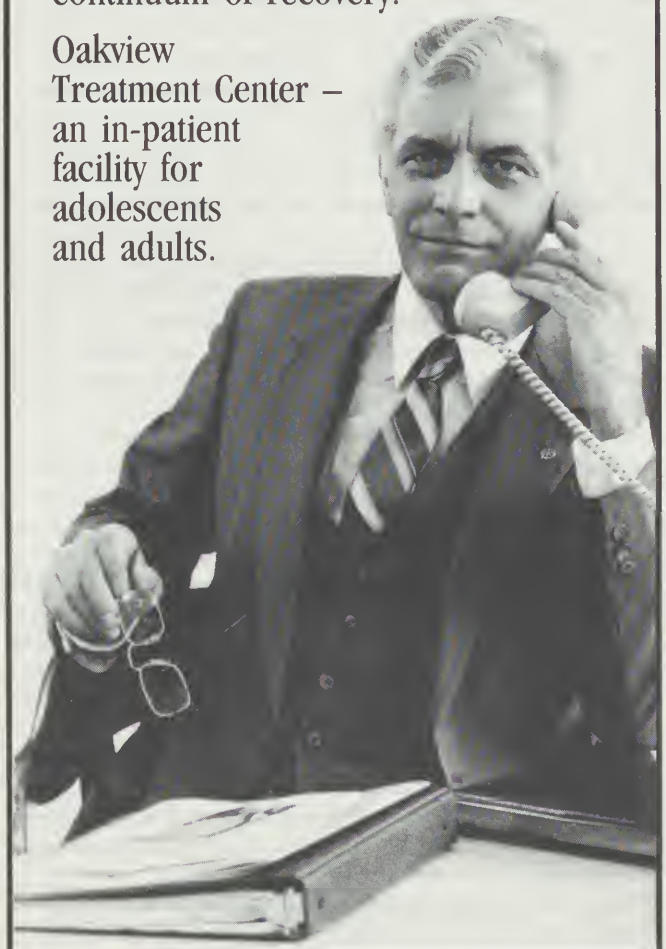
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Adult T-Cell Lymphoma: Case Report

MARGARETHE MACIULIS MD, GEORGE LAWRENCE MD, and EMILE MOHLER MD

Adult T-cell lymphoma-leukemia (ATLL) is caused by the HTLV-I, which belongs to the same family of retroviruses as the HTLV-III known to cause AIDS. This disorder is rare in the United States and usually has been reported in patients from endemic areas such as the southwest islands of Japan and the West Indies.

From the Department of Medicine, St. Agnes Hospital, Baltimore. Presented in part at the American College of Physicians Associates Meeting, May 1985.

This illness first was described from Japan in 1977[1] and has been shown to be caused by a retrovirus, human T-cell lymphocytotrophic virus I (HTLV-I). We report on a Maryland patient with ATLL who died nine months into her illness.

Case Report

A 56-year-old black female presented with a six-week history of progressive and generalized weakness, easy fatiguability, polyuria, polydipsia, dry mouth, constipation, dizziness, inability to concentrate, anorexia, and a 10-pound weight loss. The patient was born in New York City but had resided in Ellicott City for the past 20 years. She had visited the Caribbean Islands with her husband four years prior to her admission.

She had a history of hypertension, which was treated with a diuretic. A total hysterectomy was performed in 1975 for a right ovarian serous cystadenocarcinoma, followed by treatment with intraperitoneal radioactive phosphorus (P^{32}).

Review of systems was positive for occasional dyspepsia readily relieved by the use of calcium carbonate (Tums) 1 to 2 tablets per day. There was no history to suggest kidney stones.

Physical examination disclosed evidence of dehydration with dry mucous membranes and tenting of her skin. She was not in acute distress: BP 190/100 mmHg, pulse 86 beats/minute and regular, respirations 24/minute and unlabored. There were no skin eruptions or any palpable lymphadenopathy, and HEENT examination was normal. The chest was clear to auscultation and percussion; a grade II/VI systolic ejection murmur was noted. There was no palpable enlargement of the liver or spleen. Extremities were normal. Neurological examination was normal.

Laboratory findings on admission are listed in Table 1. Because of profound hypercalcemia, initial management included infusions of normal saline and multiple doses of Furosemide and mithramycin. In addition, the patient received calcitonin and Prednisone (Figure 1). On this regimen her lowest serum calcium was 12 mg/dl. Studies related to the hypercalcemia (listed in Table 2) revealed an elevation of C-terminal PTH interpreted as secondary to her renal insufficiency.

Her white count on admission was 31,800/mm^3 with 66% lymphocytes. The lymphocytes were distinctly abnormal and had multilobulated, knobby appearing nuclei (Figure 2). Bone marrow biopsy disclosed no tumor but did demonstrate trabecular fibrosis, increased osteoclastic activity, and bone lysis. Skeletal films of skull, both clavicles, hands, and left femur were normal.

Figure 1. Clinical course of patient.

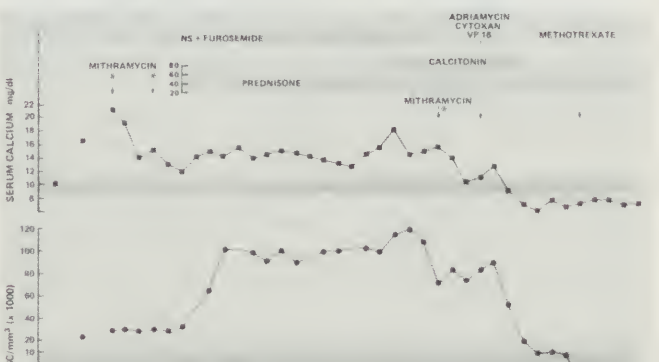


Table 1. Initial Laboratory Findings

Hgb 13.8 gm/dl, Hct 40.5%, WBC 31,000/mm^3 (66% lymphocytes, 27% neutrophils, 6% monocytes), platelets 291,000/mm^3

	Patient	Normal (mg/dl)		Patient	Normal U/ml
Ca^{++}	21.0	(8.6–10.5)	Alk. Phos.	537	(35–110)
PO_4	1.9	(2.5–4.5)	LDH	325	(10–195)
BUN	32.0	(8–21)	SGOT	24	(10–30)
Cr	2.7	(0.7–1.4)	SGPT	18	(5–35)
Uric acid	8.4	(2–7)			

Table 2. Laboratory Studies Related to Hypercalcemia and ATLL

Test	Patient	Normal	Test	Patient	Normal
C-terminal PTH	714	(50–340 pg/ml)	T-lymphocytes	91%	(~80%)
N-terminal PTH	5	(4–19 pg/ml)	T4-(helper)	96%	(55–75%)
Intact PTH	298	(70–330 pg/ml)			
1,25 Vitamin D	<6	(20–76 pg/ml)			
25 Vitamin D	11	(10–55 ng/ml)			
ACE*	53	(44–125U)	HTLV-AB**	+	–

* Angiotensin Converting Enzyme.
** Serum antibodies to HTLV-I (performed at NIH).

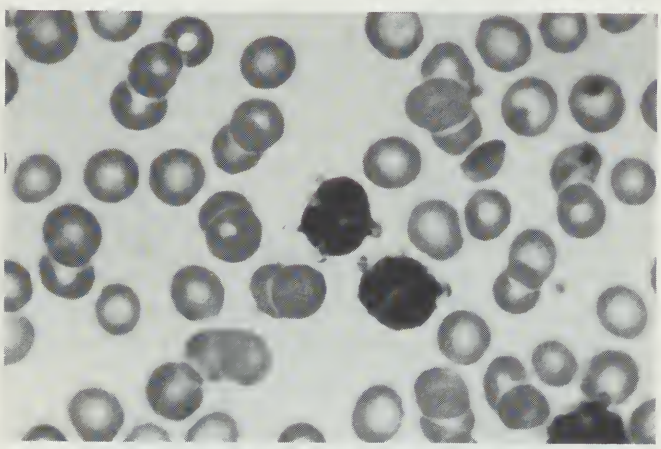


Figure 2. Peripheral blood smear with lymphocytes showing multilobulated, knobby appearing nuclei.

Increased radionuclide (99^M technetium) uptake in the skull, left femur, and both tibias were seen on bone scan. The diagnosis of ATLL was supported by lymphocyte typing that revealed 91% T-lymphocytes, 96% of those being T4 cells, and the presence of serum antibodies directed against HTLV-I (HTLV-AB) (Table 2).

She was referred to the Johns Hopkins Oncology Center where she received Adriamycin, cisplatin, VP-16, Methotrexate, and Prednisone. Her clinical course was complicated by Candida sepsis and pneumonitis, which was treated with Amphotericin. The patient had a favorable response with normalization of her total white count and serum calcium. However she still had lymphocytes with knobby appearing nuclei in her peripheral smear and was referred to the National Institutes of Health (NIH) for monoclonal antibody therapy directed against T4-lymphocyte receptors. Abnormal lymphocytes still persisted. She was then given chemotherapy with six cycles of ProMACE-cytaBOM (Procarbazine, Nitrogen mustard, Adriamycin, Cytoxan, etoposide, cytarabine, bleomycin, Oncovin, Methotrexate). Eventually she was considered to have entered into complete remission because her total white count became normal and there was no evidence of abnormal lymphocytes on examination of her peripheral smear. Her serum calcium was normal. In September 1985 she suddenly experienced chest pain and expired. An autopsy performed at NIH showed no evidence of T-cell leukemia or parathyroid disease. There was no indication of myocardial infarction or pulmonary embolism.

Discussion

In 1977 Uchiyama *et al.* described the clinical and hematological features of adult T-cell lymphoma-leukemia (ATLL).[1] They emphasized that the majority of their patients were born and raised on the southwest most island of Japan, Kyushu. Additional studies described patients with ATLL who were from the West

Indies.[2,3] Later seroepidemiological surveys measuring HTLV-I antibody (HTLV-AB) defined endemic areas in the southwestern islands of Japan and the Caribbean Islands, location of the initial case reports, and other areas of the world including Central and South America,[4] Africa,[5] and the Southeastern United States.[6] Most patients who have ATLL come from these endemic areas.[2]

The clinical spectrum of ATLL is summarized in Table 3 and is dependent on the organ systems involved.[1,8,9] Clinical abnormalities seen in our patient are also recorded. Patients usually demonstrate leukemia and lymphadenopathy and also may have hepatosplenomegaly or skin lesions during the course of their illness. The nuclei of the leukemic lymphocytes are characteristic and have a multilobulated knobby appearance (Figure 2). Recognition of this leukemic cell in peripheral blood smears aids in the clinical diagnosis of this disorder, and T-cell typing reveals the leukemic cells are T4 or T-helper cells.

Profound hypercalcemia is frequently present and was noted in our patient. The mechanism for hypercalcemia in ATLL involves bone lysis. This appears to be the result of either direct tumor involvement and lysis or bone secondary to increased osteoclastic activity.[8,9] Lytic bone lesions may be noted on skeletal survey films, and bone scans may demonstrate increased radionuclide activity. Neoplastic T4 cells from ATLL have been shown to secrete a lymphokine-osteoclast activation factor that would contribute to bone lysis.[10] Other mechanisms to explain hypercalcemia have been suggested: there was one report of increased 1,25 vitamin D levels in a patient with ATLL. After glucocorticoid therapy both the elevated 1,25 vitamin D and serum calcium levels returned to normal.[11]

The mean survival of patients after diagnosis has been approximately 11 months, reflecting the aggressive nature of the disorder.[8] Uncontrolled hypercalcemia or opportunistic infections often contribute to morbidity. A few patients have been described as having an insidious and prolonged clinical course.[1,12]

HTLV-I virus has been isolated from the T-lymphocytes in patients with ATLL. HTLV-I inserts into the DNA of the lymphocyte, and it is speculated that increased quantities of T-cell growth factor (TCGF) and TCGF receptors are produced, explaining the proliferation of lymphocytes.[13]

The mechanism of transmission of HTLV-I is not known. There is a higher frequency of HTLV-AB in family members than nonfamily members from endemic areas.[3,6] HTLV-I virus could be transmitted by blood. This is suggested by a study in Japan of 41 individuals who were initially negative for HTLV-AB. After receiving whole blood or blood components containing cells from HTLV-AB positive donors, 63 percent of the recipients became HTLV-AB positive. None have become clinically ill to date.[14]

Table 3. Clinical Features of ATLL

	Patient
Leukocytosis	+
Hypercalcemia	+
Lymphadenopathy	−
Hepatosplenomegaly	−
Pulmonary involvement	−
Skin lesions	−
Lytic (x-ray) bone lesions	−
Abnormal bone scans	+
Knobby peripheral lymphocytes	+
Bone marrow	
• Osteoclasts	+
• Tumor infiltration	−
Lymphomatous meningitis	−
Opportunistic infections	+
Antibody to HTLV-I	+

In vitro experiments have shown that HTLV-I readily infects normal T4 cells that can then grow independently of TCGF. These infected cells also exhibit the morphological features of ATLL cells.[15] It is not known whether sexual contact has any role in the transmission of ATLL as it does in AIDS, which is caused by the related HTLV-III.

It is of interest that our patient spent 16 days in an endemic area, the Caribbean Islands, four years prior to her diagnosis. Whether her visit played a role in her acquiring ATLL is open to speculation.

Our patient did respond favorably to chemotherapy, but succumbed to a probable cardiac death. No evidence of leukemia was noted at autopsy. Experience with chemotherapy in treatment of ATLL in other patients has, in general, shown only limited success.[16] Monoclonal antibodies directed against T-cell receptors given to our patient at NIH were only partially effective. This form of therapy has produced complete but unsustained remission in one patient and is receiving further attention by NIH investigators.[17,18]

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Otitis media due to *S pneumoniae, Haemophilus influenzae,* staphylococci, streptococci, and *Neisseria catarrhalis*

Skin and skin-structure infections caused by staphylococci and/or streptococci

Bone infections caused by staphylococci and/or *Proteus mirabilis*

Genitourinary tract infections, including acute prostatitis, caused by *Escherichia coli, P mirabilis,* and *Klebsiella* sp.

Note—Culture and susceptibility tests should be initiated prior to and during therapy. Renal function studies should be performed when indicated.

Contraindication: Keflet is contraindicated in patients with known allergy to the cephalosporin group of antibiotics.

Warnings: BEFORE CEPHALEXIN THERAPY IS INSTITUTED, CAREFUL INQUIRY SHOULD BE MADE CONCERNING PREVIOUS HYPERSENSITIVITY REACTIONS TO CEPHALOSPORINS AND PENICILLIN. CEPHALOSPORIN C DERIVATIVES SHOULD BE GIVEN CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS.

SERIOUS ACUTE HYPERSENSITIVITY REACTIONS MAY REQUIRE EPINEPHRINE AND OTHER EMERGENCY MEASURES.

There is some clinical and laboratory evidence of partial cross-allergenicity of the penicillins and the cephalosporins. Patients have been reported to have had severe reactions (including anaphylaxis) to both drugs.

Any patient who has demonstrated some form of allergy, particularly to drugs, should receive antibiotics cautiously. No exception should be made with regard to Keflet.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics (including macrolides, semisynthetic penicillins, and cephalosporins); therefore, it is important to consider its diagnosis in patients who develop diarrhea in association with the use of antibiotics. Such colitis may range in severity from mild to life-threatening.

Treatment with broad-spectrum antibiotics alters the normal flora of the colon and may permit overgrowth of clostridia. Studies indicate that a toxin produced by *Clostridium difficile* is one primary cause of antibiotic-associated colitis.

Mild cases of pseudomembranous colitis usually respond to drug discontinuance alone. In moderate to severe cases, management should include sigmoidoscopy, appropriate bacteriologic studies, and fluid, electrolyte, and protein supplementation. When the colitis does not improve after the drug has been discontinued, or when it is severe, oral vancomycin is the drug of choice for antibiotic-associated pseudomembranous colitis produced by *C difficile.* Other causes of colitis should be ruled out.

Usage in Pregnancy—Safety of this product for use during pregnancy has not been established.

Precautions: *General*—Patients should be followed carefully so that any side effects or unusual manifestations of drug idiosyncrasy may be detected. If an allergic reaction to Keflet occurs, the drug should be discontinued and the patient treated with the usual agents (eg, epinephrine or other pressor amines, antihistamines, or corticosteroids).

Prolonged use of Keflet may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Positive direct Coombs' tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coombs' testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs' test may be due to the drug.

Keflet should be administered with caution in the presence of markedly impaired renal function. Under such conditions, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended.

Indicated surgical procedures should be performed in conjunction with antibiotic therapy.

As a result of administration of Keflet, a false-positive reaction for glucose in the urine may occur. This has been observed with Benedict's and Fehling's solutions and also with Clinitest® tablets but not with Tes-Tape® (Glucose Enzymatic Test Strip, USP, Lilly).

Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.

Usage in Pregnancy—Pregnancy Category B—The daily oral administration of cephalexin to rats in doses of 250 or 500 mg/kg prior to and during pregnancy, or to rats and mice during the period of organogenesis only, had no adverse effect on fertility, fetal viability, fetal weight, or litter size. Note that the safety of cephalexin during pregnancy in humans has not been established.

Cephalexin showed no enhanced toxicity in weanling and newborn rats as compared with adult animals. Nevertheless, because the studies in humans cannot rule out the possibility of harm, Keflet should be used during pregnancy only if clearly needed.

Nursing Mothers— The excretion of cephalexin in the milk increased up to 4 hours after a 500-mg dose; the drug reached a maximum level of 4 μg/mL, then decreased gradually, and had disappeared 8 hours after administration. Caution should be exercised when Keflet is administered to a nursing woman.

Adverse Reactions: *Gastrointestinal*—Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment. Nausea and vomiting have been reported rarely. The most frequent side effect has been diarrhea. It was very rarely severe enough to warrant cessation of therapy. Dyspepsia and abdominal pain have also occurred. As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.

Hypersensitivity— Allergic reactions in the form of rash, urticaria, angioedema, and, rarely, erythema multiforme, Stevens-Johnson Syndrome, or toxic epidermal necrolysis have been observed. These reactions usually subsided upon discontinuation of the drug. Anaphylaxis has also been reported.

Other reactions have included genital and anal pruritus, genital moniliasis, vaginitis and vaginal discharge, dizziness, fatigue, and headache. Eosinophilia, neutropenia, thrombocytopenia, and slight elevations in SGOT and SGPT have been reported.

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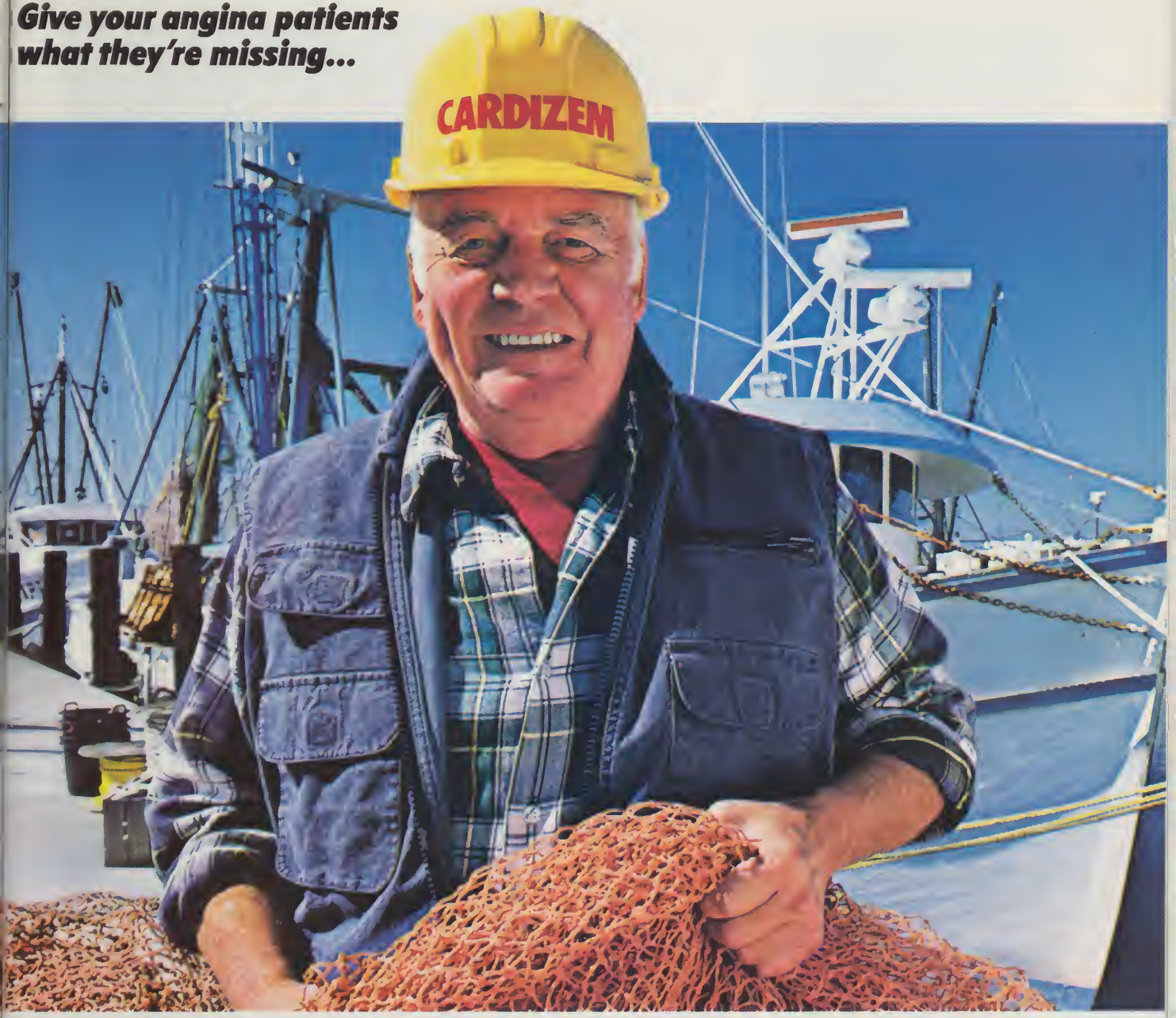
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- ***A safe choice for angina patients with coexisting hypertension, asthma, COPD, or PVD[4,5]***

90 mg GREATER DOSAGE FLEXIBILITY NEW 120 mg

***See Warnings and Precautions.**

Please see brief summary of prescribing information on the next page.



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diltiazem HCl/Marion

60 mg tid or qid

Brief Summary
Professional Use Information

CARDIZEM®
(diltiazem HCl) 30 mg and 60 mg Tablets

CONTRAINDICATIONS
CARDIZEM is contraindicated in (1) patients with sick sinus syndrome except in the presence of a functioning ventricular pacemaker, (2) patients with second- or third-degree AV block except in the presence of a functioning ventricular pacemaker, and (3) patients with hypotension (less than 90 mm Hg systolic).

WARNINGS

1. ***Cardiac Conduction.*** *CARDIZEM prolongs AV nodal refractory periods without significantly prolonging sinus node recovery time, except in patients with sick sinus syndrome. This effect may rarely result in abnormally slow heart rates (particularly in patients with sick sinus syndrome) or second- or third-degree AV block (six of 1,243 patients for 0.48%). Concomitant use of diltiazem with beta-blockers or digitalis may result in additive effects on cardiac conduction. A patient with Prinzmetal's angina developed periods of asystole (2 to 5 seconds) after a single dose of 60 mg of diltiazem.*
2. ***Congestive Heart Failure.*** *Although diltiazem has a negative inotropic effect in isolated animal tissue preparations, hemodynamic studies in humans with normal ventricular function have not shown a reduction in cardiac index nor consistent negative effects on contractility (dp/dt).*
   Experience with the use of CARDIZEM alone or in combination with beta-blockers in patients with impaired ventricular function is very limited. Caution should be exercised when using the drug in such patients.
3. ***Hypotension.*** *Decreases in blood pressure associated with CARDIZEM therapy may occasionally result in symptomatic hypotension.*
4. ***Acute Hepatic Injury.*** *In rare instances, significant elevations in enzymes such as alkaline phosphatase, CPK, LDH, SGOT, SGPT, and other symptoms consistent with acute hepatic injury have been noted. These reactions have been reversible upon discontinuation of drug therapy. The relationship to CARDIZEM is uncertain in most cases, but probable in some. (See PRECAUTIONS.)*

PRECAUTIONS
General. *CARDIZEM (diltiazem hydrochloride) is extensively metabolized by the liver and excreted by the kidneys and in bile. As with any new drug given over prolonged periods, laboratory parameters should be monitored at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic function. In subacute and chronic dog and rat studies designed to produce toxicity, high doses of diltiazem were associated with hepatic damage. In special subacute hepatic studies, oral doses of 125 mg/kg and higher in rats were associated with histological changes in the liver which were reversible when the drug was discontinued. In dogs, doses of 20 mg/kg were also associated with hepatic changes; however, these changes were reversible with continued dosing.*

Drug Interaction. *Pharmacologic studies indicate that there may be additive effects in prolonging AV conduction when using beta-blockers or digitalis concomitantly with CARDIZEM. (See WARNINGS.)*

Controlled and uncontrolled domestic studies suggest that concomitant use of CARDIZEM and beta-blockers or digitalis is usually well tolerated. Available data are not sufficient, however, to predict the effects of concomitant treatment, particularly in patients with left ventricular dysfunction or cardiac conduction abnormalities. In healthy volunteers, diltiazem has been shown to increase serum digoxin levels up to 20%.

Carcinogenesis, Mutagenesis, Impairment of Fertility. *A 24-month study in rats and a 21-month study in mice showed no evidence of carcinogenicity. There was also no mutagenic response in in vitro bacterial tests. No intrinsic effect on fertility was observed in rats.*

Pregnancy. *Category C. Reproduction studies have been conducted in mice, rats, and rabbits. Administration of doses ranging from five to ten times greater (on a mg/kg basis) than the daily recommended therapeutic dose has resulted in embryo and fetal lethality. These doses, in some studies, have been reported to cause skeletal abnormalities. In the perinatal/postnatal studies, there was some reduction in early individual pup weights and survival rates. There was an increased incidence of stillbirths at doses at 20 times the human dose or greater.*

There are no well-controlled studies in pregnant women; therefore, use CARDIZEM in pregnant women only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. *Diltiazem is excreted in human milk. One report suggests that concentrations in breast milk may approximate serum levels. If use of CARDIZEM is deemed essential, an alternative method of infant feeding should be instituted.*

Pediatric Use. *Safety and effectiveness in children have not been established.*

ADVERSE REACTIONS
Serious adverse reactions have been rare in studies carried out to date, but it should be recognized that patients with impaired ventricular function and cardiac conduction abnormalities have usually been excluded.

In domestic placebo-controlled trials, the incidence of adverse reactions reported during CARDIZEM therapy was not greater than that reported during placebo therapy.

The following represent occurrences observed in clinical studies which can be at least reasonably associated with the pharmacology of calcium influx inhibition. In many cases, the relationship to CARDIZEM has not been established. The most common occurrences as well as their frequency of presentation are: edema (2.4%), headache (2.1%), nausea (1.9%), dizziness (1.5%), rash (1.3%), asthenia (1.2%). In addition, the following events were reported infrequently (less than 1%):

Cardiovascular:	*Angina, arrhythmia, AV block (first degree), AV block (second or third degree — see conduction warning), bradycardia, congestive heart failure, flushing, hypotension, palpitations, syncope.*
Nervous System:	*Amnesia, gait abnormality, hallucinations, insomnia, nervousness, paresthesia, personality change, somnolence, tinnitus, tremor.*
Gastrointestinal:	*Anorexia, constipation, diarrhea, dysgeusia, dyspepsia, mild elevations of alkaline phosphatase, SGOT, SGPT, and LDH (see hepatic warnings), vomiting, weight increase.*
Dermatologic:	*Petechiae, pruritus, photosensitivity, urticaria.*
Other:	*Amblyopia, dyspnea, epistaxis, eye irritation, hyperglycemia, nasal congestion, nocturia, osteoarticular pain, polyuria, sexual difficulties.*

The following postmarketing events have been reported infrequently in patients receiving CARDIZEM: alopecia, gingival hyperplasia, erythema multiforme, and leukopenia. However, a definitive cause and effect between these events and CARDIZEM therapy is yet to be established. ***Issued 7/86***

See complete Professional Use Information before prescribing.

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History of Contraception in Baltimore

D. FRANK KALTREIDER MD

The following speech was given on the occasion of the Third Annual Sinai Symposium, which honored Ruth Finkelstein MD, a distinguished physician in our community for over 50 years and a pioneer in Baltimore's family planning movement. She began to emancipate women long before it was fashionable. By teaching women that they were, in fact, in control of their own reproductive careers, she had a powerful impact on many lives. Her commitment to women's health and independence was manifest in both her practice and her involvement in Planned Parenthood.

Dr. Kaltreider is Professor Emeritus, Department of OB/GYN, University of Maryland School of Medicine.

The first historical record of contraception appears in the Kahoun Papyrus found near Faiyum, Upper Egypt and has been dated between 2200 to 1950 B.C.[1] The modern impetus for the dissemination of knowledge of social and economic problems caused by unrestricted and unwanted pregnancy began with Robert Owens' "Moral Philosophy" in 1831 and Charles Knowlton's "Fruits of Philosophy" in 1832.[2] Both articles resulted in their authors being in and out of British jails for decades. But these authors were preceded by another Englishman, William Shakespeare, who wrote in *Timon of Athens*: "Ensear thy fertile and conceptious womb. Let it no more bring out ingrateful man."[3] The condom, in the form of a sheath produced from a sheep's cecum, was available even in the sixteenth century, but the moral climate in Britain was generally hostile to pregnancy prevention.

The restrictive attitude that permeated all religions and social endeavors even affected our national governance. Congress passed the Comstock Laws (named for the Nevadan who located the Comstock Lode) that stated that mailing pornographic material in any form was illegal and that zealous prosecution of anyone encouraging pornography was the penalty. Physicians interpreted these laws to mean that providing contraceptive advice was also forbidden.

Physicians' interest in birth control was noticeably absent in the United States. However, Abraham Jacobi, in 1912, while president of the AMA, was one of the first to openly recommend the prevention of pregnancy under certain conditions of health.

Margaret Sanger was the next historical focus. She opened a birth control clinic in Brooklyn in 1916, was jailed, and was in court off and on for the next seven years. She was successful in reopening the clinic in 1923.

Local Experience

The pregnancy prevention environment in Baltimore was reflective of this restrictive policy. But in 1926 a committee on contraception advice was organized by the professor of obstetrics at Hopkins, J. Whitridge Williams MD, and a professor of biology in the School of Hygiene, Raymond Pearl MD. They met with interested community leaders, and their deliberations resulted in the opening of the Bureau for Contraceptive Advice on November 2, 1927, at 1028 N. Broadway, across the street from Johns Hopkins Hospital. There was no official relationship between the clinic and the Medical School because the Board of Trustees of the University refused this association. The purpose of the clinic was "To give advice concerning the prevention of conception to such women as may be sent to it by reputable physicians with a statement that in his or her opinion the mental or physical condition of the patient will be aggravated by further childbearing."[4]

Bessie Moses MD was administrator of the clinic until she retired in 1956. Eventually she was joined by Margaret Ballard MD, and these two women ran the clinic for the first five years. At the clinic's inception, Dr. Moses wrote a letter to all physician members of the State Medical Society inviting them to send patients; in return she received letters accusing her of trying to steal patients! Despite this turn of events, 86 patients were referred in the first year, and 140 patients were seen in the fifth year.



Dr. Kaltreider, a long-time resident of and practitioner in Baltimore, was President of the Baltimore City Medical Society in 1968 and is a prolific author of scientific articles.



Bessie Moses MD

In 1932 the "unofficial" committee released its control to new sponsors, all of whom were nonphysician women and renamed the clinic, "The Baltimore Contraception Clinic." Dr. and Mrs. Donald Hooker donated the building in which it was housed. The same year the Medical Advisory Committee was founded under the direction of J. McFarland Bergland MD. Except for the founders and the Medical Advisory Board, most male physicians were not involved with contraception.

In 1936 Dr. Moses published the results of five years' experience in a small volume, *Contraception; a Therapeutic Measure.*[4] During these years the following contraceptives were prescribed: the diaphragm in 84 percent of the cases and cervical caps, condoms, sponges, coitus interruptus (all associated with a jelly) in the remaining 16 percent. The reasons for referral were medical and mental disease in 66 percent of patients and multiparity in 27 percent. Multiparity ranged from para 2 to 13 and over and included as a criterion a short interval between pregnancies. In the remaining 7 percent of women were such indications as husband's illnesses, eugenic disorders, marital disharmony, and economic reasons. Socioeconomic reasons were introduced early in this experience.

That same year the Comstock Laws were reinterpreted by the courts to allow physicians to provide contraception and dissemination of information on methods. These restraints had not been adhered to by the Clinic, and they frequently sent jellies and other paraphernalia through the mails.

In 1937 the AMA endorsed birth control as an essential health service. Until that point contraception had been chiefly a female crusade for the release of women from the idea that in the area of pregnancy they were the chattels of men.

When Provident Hospital refused to open a clinic, Louise Young MD opened the Northwest Health Center for black patients in 1938. Contraception was one of its main purposes. In 1942 shortly after Alan Guttmacher MD became Chairman of Obstetrics at Sinai Hospital, Ruth Finkelstein MD obtained permission to open a clinic at the hospital, and it has more than prospered since. These openings encouraged educational programs in other small clinics and the postpartum wards of hospitals, mainly under the supervision of the Baltimore Contraception Clinic and later under Planned Parenthood. Private physicians began to disseminate knowledge of contraception. During these years students at the two medical schools received little information concerning birth control, although they were given some instruction about sterilization.

Planned Parenthood in Baltimore

In 1942 Robert Dickinson MD suggested to Margaret Sanger that her movement be called Planned Parenthood. The Baltimore group then adopted this name and became incorporated. In the late 1940s and the 1950s, under the aegis of the Committee of Clergy, Planned Parenthood gained endorsement of the Jewish and Protestant religious groups. This Committee, at the request of volunteers, recommended to Planned Parenthood's Board that unmarried as well as married adults be given advice about contraception and child spacing. They worked strenuously to break down barriers and erase the apathy in the community.

Because of conservative regulations in the health departments and social service agencies, many women in need were neither referred for help nor received it. Two sessions of the grand jury as well as a report from the Governor's Commission to study the Problems of Illegitimacy in the late 1950s recommended referring welfare patients to Planned Parenthood. In 1962 the State Board of Welfare recommended referring married clients for family planning. This change was instigated by repeated requests from Planned Parenthood to the Board.

In December 1963 the Commissioner of Health for Baltimore City asked Planned Parenthood if they would set up 12 weekly family planning sessions in their prenatal and postpartum clinics and continue to run them until financing for them was available. Ruth Finkelstein MD was the planner and executrix of this project and had it well-organized and active within a few months. The health department received funds for the project in 1965; it was the first health department in the country to underwrite family planning. In 1962 the State Health Department began urging their health officers to include family planning services in their programs but did not insist on this counseling.



Ruth Finkelstein MD

Methods

Until 1962 the most commonly used methods of contraception were the diaphragm, the condom, and rhythm. All had varying degrees of failure depending on availability, responsibility, economics, and education. Effective hormonal contraception became available in the early 1960s, and since then many varieties have been developed. Since oral contraceptives are simple to use and are not time linked to intercourse, they were well accepted. A wide variety of complications were reported and were to be expected, considering the profound interference in normal human biochemistry. During the succeeding years, with experience, with objective collection of data, and with subsequent change in hormone content (both quantitative and qualitative)

the problems associated with hormonal control decreased. What has not been understood by the general public, the news media, and a surprisingly large number of physicians is that the complications of pregnancy, both short and long term, have always been greater than those of the "pill."

Unmarried teenagers constituted one large group of sexually active women left by the wayside during this period. In 1963, family planning services became available at Baltimore City Hospitals. It became evident that without serving the teenager, a large population that needed the information would not be served. At that time Maryland law gave a physician permission to treat a minor only in an emergency. In nonemergency situations, even a married minor needed her husband's consent. A group of citizens, of varied religious backgrounds requested the state to make it possible for a minor to seek pregnancy care without parental consent. The state obliged in 1965 and added contraception, venereal disease, and psychiatric problems to this law in 1969.

All during these years and for the following two decades, the major emphasis in birth control had been in educating the female. The male was largely ignored. For example, the medical board of Planned Parenthood denied a request to reduce the charge for a condom from 25 cents to 1 cent with Planned Parenthood supplementing the difference.

Were any other efforts made to include the male? Yes, particularly in the form of educational classes in churches that were taught by medical students. A program was activated to have sex education taught in the schools. Efforts were made, but they were sadly ineffective.

Why is it that although great strides have been made with the adult female, there has been failure with the teenage male and female? Maybe for the same reason few people play golf well: the golf swing is entirely unnatural. All of us would rather do what comes naturally, including the teenage male and female. Doing what is unnatural can only be accomplished through responsibility. Although responsibility in general can be taught to children, I am convinced that responsibility isolated to sexual matters cannot be taught adequately to teenagers. If the young child is taught it in a general way, when he or she becomes a teenager and an adult there may be responsibility in many specific ways. From a long-range viewpoint it is most important to educate the parents of today's small children to teach their children concepts of responsibility.

Media Messages

But how can we reach today's unmarried mothers and educate them to teach responsibility to their children? The various media have informed the public that the pill is worse than pregnancy, which of course is not true. Educating children and teenagers to accept sexual responsibility through the usual *modus operandi* has not been successful. Today television is the most effective tool for education of children and teenagers; possibly better than our public schools. Unfortunately commercial television frequently teaches the reverse of sexual responsibility. Convincing television management to release positive information, such as the safety of the pill in relation to pregnancy, and permission to advertise contraception, rather than encourage unprotected sex as in most popular series, could be effective. The current condom controversy relative to AIDS seems cut from the same cloth. Money likely will dictate media response and money speaks louder than words to today's management.

Many permanent types of birth control prior to 1932 depended on either medical or surgical indications in the female, for example, heart disease or three or more cesarean sections. Accepting multiparity as a medical indication was an amazing delusion in medical honesty. In 1932 Eastman showed that a female in her ninth pregnancy would experience a marked increase in the risk of death. So para 8 became a medical indication for sterilization. By 1937 it was para 6. By late 1940 it was para 5. Did it stop there? No indeed. If I remember correctly the last formula for this medical indication was para 3 and age 35 and over, or age 25 and para 4.

In 1965 at Baltimore City Hospital sterilization finally was allowed on demand, which meant that any woman, even if never pregnant, could be sterilized if she requested it. The only requirement was attaining legal adult status. Prior to this time the signed consent of the husband was also necessary; if the husband objected, it was not done.

In the 1960s a fortunate advance in sterilization was accomplished with the introduction of laparoscopy. The procedure was refined by using cautery for electrical destruction of portions of the tube or by applying plastic rings. A further benefit of laparoscopy was its application on an outpatient basis, thus making it more economical.

All is not perfect with female sterilization however. Artemis Panayis MD and I followed a group of more than 200 women who had been sterilized. We obtained a 70 percent follow-up for two years and were distressed to discover that 10 percent of them seriously regretted having the operative procedure. The reasons included a sense of loss of femininity, a desire for more children, a loss of sexual desire, or a loss of a partner. Of course 90 percent were happy, enjoyed life more, and became healthier (they thought). Some enjoyed sexual activity

more. A second study was unsuccessful in determining which patients requesting permanent sterilization should be advised to use only the temporary methods because of risks of psychological sequelae.

Vasectomy, recommended long ago, was infrequently used until recently. On many occasions when it was believed a sterilization procedure was not in the best interest of the female, the husband had been unwilling to have his "tubes tied." Fortunately it has become more popular.

One other observation is pertinent to this discussion. Without the change in social mores and without the success obtained with the various methods of contraception, there would not have been the dramatic drop in perinatal and infant mortality in Baltimore City that occurred during the decade 1962 to 1972. The greater decrease was recorded in black children. I do not wish to infer that improved prenatal, obstetric, and neonatal care were of no value in this regard. But I do believe that without the change in social attitudes toward contraception and sterilization the decrease in infant mortality would have been much less. Contraception and sterilization changed the pregnant population from the poor reproducers to a younger, healthier, lower parity group. This side effect of birth control was in itself a worthwhile accomplishment, and Dr. Ruth Finkelstein is a living symbol of this achievement.

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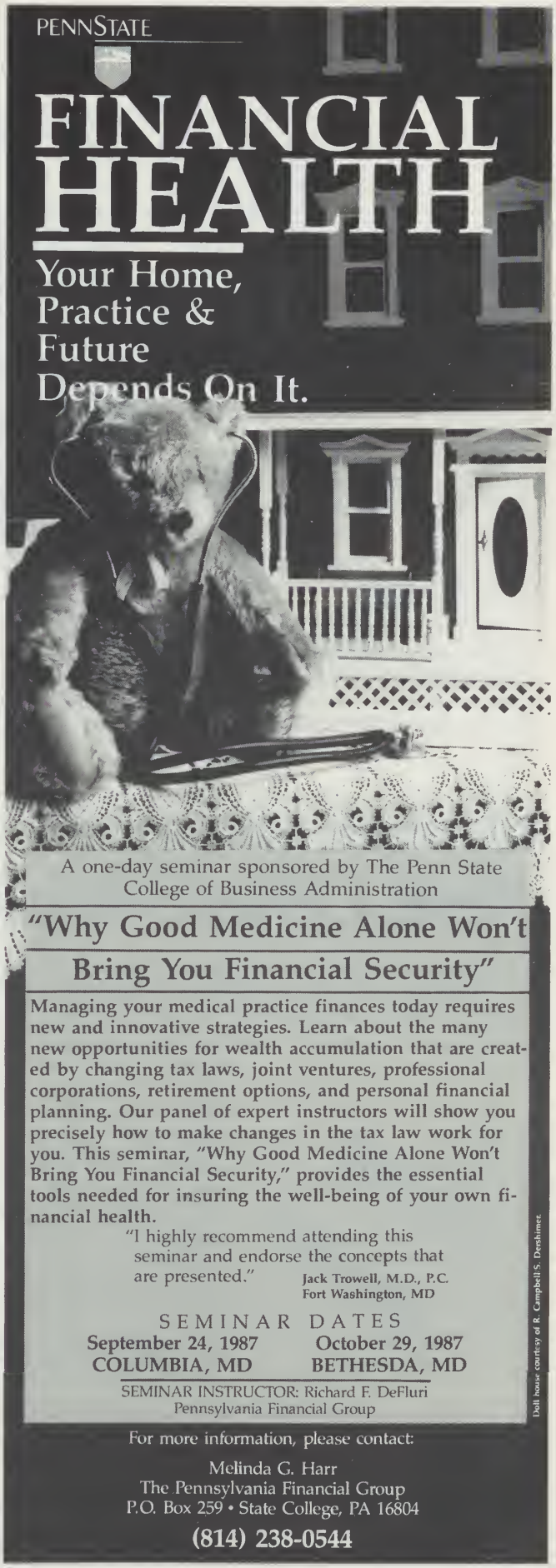
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Members in the News

Aristides C. Alevizatos MD has been named medical director of the new Alcohol Treatment Unit at Mercy Hospital. Prior to his appointment, he served as director of Mercy's medical outpatient division.

A graduate of the University of Maryland Medical School, he served internship at Mercy and residency at University Hospital. Dr. Alevizatos is certified by the American College of Physicians. He maintains an Internal Medicine practice at Mercy and is past president of the Maryland Society of Internal Medicine.

• • •

The American Lung Association has presented the 1987 Trudeau Medal to **George W. Comstock** MD, DrPH, of The Johns Hopkins School of Public Health, for his studies of tuberculosis. The medal, the most valued in pulmonary medicine, was presented in New Orleans during the ALA's annual meeting.

Dr. Comstock served on the US Public Health Service's team whose studies of the causes of TB and its course in the 1940s and 1960s made possible the proper use of diagnostic skin-testing, mass chest X-ray surveys, preventive measures such as the BCG vaccine, and therapies for TB patients.

Dr. Comstock popularized the concept that TB is a two-stage disease, first as a general infection that can become latent, and second, a later reoccurrence in the lungs. He also fostered the concept that control should not be limited to treating patients with symptoms. An epidemiologist, he advocated identifying those at risk of getting TB and using preventive therapy.

Dr. Comstock received his BS degree from Antioch College and his medical degree from Harvard Medical School. He has a MPH from the University of Michigan School of Public Health and a doctor of public health from Hopkins.

• • •

Ferdinand S. Leacock MD has been appointed Chief of Thoracic Surgery at Maryland General Hospital. A graduate of the Howard Medical College, Washington, DC, Dr. Leacock completed a Rotating Internship at the San Joaquin General Hospital, Stockton, CA, and a Thoracic Surgery Residency at the University of Maryland Hospital, Baltimore. He is certified by both the Board of Thoracic Surgery and the American Board of Surgery.

• • •

The American College of Physicians (ACP) recently honored outstanding contributions to medicine and health care at its 68th annual scientific meeting in New Orleans, LA. **Paul R. McHugh** MD, chairman of the Department of Psychiatry and Behavioral Sciences at The Johns Hopkins School of Medicine, was honored with the William C. Menninger Memorial Award for contributions to the science of mental health. He currently leads a research team investigating reversible and irreversible dementias.

Dr. McHugh received his bachelor's degree from Harvard College in 1952 and his medical degree from Harvard Medical School in 1956. He was an intern at the Peter Bent Brigham Hospital and a neurology resident and neuropathology fellow at the Massachusetts General Hospital.

Dr. McHugh is a member of the American Psychiatric Association, the Royal College of Psychiatrists, the American Neurological Association, the American Physiological Society, and numerous other related organizations.

• • •

Mansour G. Panah MD has been elected chairman of the Division of Gynecology at AMI Doctors' Hospital in Lanham. Dr. Panah received his medical degree from the Tehran University and completed his internship at Yonkers General Hospital and OB/GYN residency at Greater Baltimore Medical Center and The Johns Hopkins Hospital and University. He was certified by the American Board of Obstetrics and Gynecology in 1977. He established a private practice in Bowie and has been on the medical staff of Prince George's General Hospital and Medical Center as well as an active member of AMI Doctors' Hospital for the past 12 years.

• • •

Frederick N. Sugar MD has been appointed Head of the Division of Neurosurgery at Maryland General Hospital. A graduate of the University of Maryland, College Park, he received his medical degree from the University of Maryland Medical School where he also completed internship and residency. A fellow of the Department of Neuropathology, Institute of Neurology, The National Hospital, Queen Square, London, England, Dr. Sugar is certified by the American Board of Neurological Surgery. He is active in numerous medical societies and is an instructor at the University of Maryland School of Medicine.

• • •

Joanne Waeltermann MD recently was named the director of the new Out Patient Pediatric Ophthalmology Service at St. Agnes Hospital. Dr. Waeltermann came to Baltimore two years ago after completing her pediatric ophthalmology fellowship at Children's Mercy Hospital in Kansas City. She is a medical graduate from Wayne State University of Detroit and did her ophthalmology residency at Sinai Hospital. Dr. Waeltermann is also an instructor at the University of Maryland and Maryland General Hospitals.

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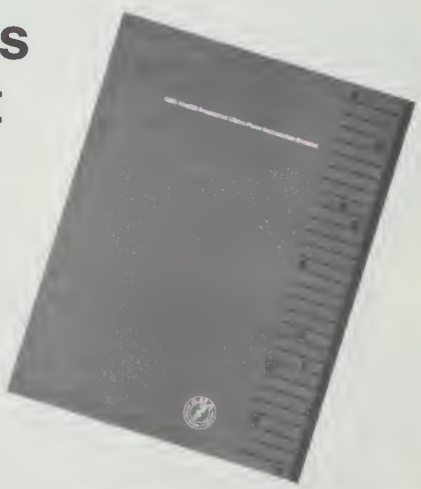
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Doctors Take Note

Miscellaneous Meetings

Jul 24–26 Ninth Annual Pediatric Primary Care Conference: Pediatrics at the Beach, Medical College of Virginia CME Activity, Cavalier Resort, Virginia Beach, VA. Fee: $275; 14.25 AMA Cat I credits, 14.25 PREP credits, 1.4 CEU credits. Info: Ann Potter, 804-786-0494.

Sep 8–11 International Organ Transplant Forum sponsored by Presbyterian-University Hospital of Pittsburgh, the Junior League of Pittsburgh, The University of Pittsburgh, and Children's Hospital of Pittsburgh; and held at Pittsburgh's David L. Lawrence Convention Center and Vista International Hotel. Info: A. Metzger, Chairperson of Public Relations, Committee for Organ Transplant Forum, DeSoto at O'Hara Sts., Pittsburgh, PA 15213 (412-647-7723).

Sep 10–11 NIH Technology Assessment Workshop on the Health Benefits of Pets, Masur Auditorium, Warren Grant Magnuson Clinical Center, NIH, Bethesda, Info: S. Feldman, Prospect Assoc., Ste 500, 1801 Rockville Pike, Rockville, MD 20852 (301-468-6555).

Sep 28–30 Community Re-Entry Following Head Injury—Return to Work, School, Family, and Social Life for Adults and Children, sponsored by the Rehabilitation Institute of Pittsburgh, at the Vista Hotel, Pittsburgh, PA. Info: Training Dept, Rehabilitation Institute of Pittsburgh, 6301 Northumberland St., Pittsburgh, PA 15217 (412-521-9000).

Oct 10–11 Regional Review Course in Hand Surgery to be held in Philadelphia, PA. Credits: 12 hrs; info: T. Harrington, American Society for Surgery of the Hand, 3025 S. Parker Rd., Ste. 65, Aurora, CO 80014 (303-755-4588).

Oct 19–21 NIH Consensus Development Conference: Geriatric Assessment Methods for Clinical Decision Making, Masur Auditorium, Warren Grant Magnuson Clinical Center, NIH, Bethesda. Info: M. Bernstein, Prospect Assoc., Ste. 500, 1801 Rockville Pike, Rockville, MD 20852 (301-468-6555).

Oct 22–24 New Techniques and Concepts in Cardiology, Washington, DC. Fee: $350, ACC members; $395, nonmembers; $175, residents, fellows in training, nurses, and technicians. 16 Cat I credits. Info: American College of Cardiology 800-253-4636, 301-897-5400, ext 226 (MD and AK).

Oct 26–28 NIH Consensus Development Conference: Magnetic Resonance Imaging, Masur Auditorium, Warren Grant Magnuson Clinical Center, NIH, Bethesda. Info: S. Feldman, Prospect Assoc., Ste. 500, 1801 Rockville Pike, Rockville, MD 20852 (301-468-6555).

Nov 19–21 Tenth National Trauma Symposium: Challenges of the '90s, Baltimore Convention Center. Info: P. McAllister, MIEMSS, 22 S. Greene St., Baltimore, MD 21201 (301-328-2399).

The Johns Hopkins Medical Institutions

All courses at the Turner Auditorium Building unless otherwise indicated. Sponsored Continued Education Activities for 1987–88. Info: Office of Continuing Education, 720 Rutland Ave., Turner Auditorium, Baltimore, MD 21205 (301-955-5880).

Sep 17–18 Pediatrics for the Practitioner—Update '87. Fee: physicians, $190; nurse/practitioners and retired physicians, $125; 13 AMA Cat I credits. Info: J. Ryan.

Sep 18–20 Diagnostic Ultrasound in Obstetrics and Gynecology, Baltimore Marriott, Inner Harbor Hotel. Fee: $325 physicians, $250 sonographers/RNs; 19 AMA Cat I credits, ACOG cognates available, ASRT credit. Info: C. Kearney 301-955-3168.

Oct 12–14 Laser Angioplasty and Interventional Radiology. Fee: $400 physicians, $200 residents, nurses, techs; 25 AMA cat I credits. Info: C. Kearney 301-955-3168.

Oct 15–17 Thirteenth Annual Topics in Gastroenterology and Liver Disease. Fee: $340 physicians, $170 residents and fellows (with letter verifying status); 20.5 AMA Cat I credits. Info: J Ryan 301-955-6046.

Oct 26–30 Twenty-ninth Annual Emil Novak Memorial Course: Gynecology, Gynecologic Pathology, Endocrinology, and Obstetrics. Fee: $550 physicians, $400 residents; 44 AMA Cat I credits. Info. C. Kearney 301-955-3168.

Nov 4–5 Progress in *in vitro* Toxicology, sponsored by The Johns Hopkins Center for Alternatives to Animal Testing. Fee: Before Oct 2—$225, thereafter—$275; 15 AMA Cat I credits, 1.5 CEU. Info: J. Ryan 301-955-6046.

Dec 7–9 Interventional Neuroradiology: Current Practices and Technique. Fee: $500 physicians, $400 technicians; 22.5 AMA Cat I credits. Info: C. Kearney 301-955-3168.

Johns Hopkins Medical Grand Rounds: audiocassettes, slides, and booklet. 30 topics and 40 AMA Cat I credits/year. Contact 301-955-3988, Office of Continuing Education, 720 Rutland Ave., Baltimore, MD 21205.

Ophthalmic Electrophysiology Technician Training Course (on-going 1-week course by appointment), The Wilmer Eye Institute, Baltimore. Info: C.M. Kearney.

The Department of Radiology and Radiological Science offers several courses in abdominal and obstetrical ultrasound: Courses scheduled 1/12/87–12/7/87. Info: J. Mosmiller 301-955-8450.

Basic Practicum, Nov 16–20. Fee: $460; 40 AMA Cat I credits.

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Visiting Physicians is offered throughout the year, by appointment only. Fee: $460, 40 AMA Cat I credits.

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University of Maryland School of Medicine

CME Courses: For each course additional information may be obtained by contacting Program of Continuing Education, University of Maryland School of Medicine, Room 300, MSTF, 10 South Pine St., Baltimore, MD 21201 (301-328-3956).

Sep 11 Pediatric AIDS Symposium, Omni International Hotel, Baltimore (half-day program). Fee: $50; 3 AMA Cat I credits.

Sep 11–12 Urologic Surgery, Omni International Hotel, Baltimore. Fee: $175; 11.5 AMA Cat I credits.

Sep 17 Update on the Menopause: Contemporary Clinical Issues, International Hotel at BWI. Fee: $25; 5.5 AMA Cat I credits.

Sep 18–20 Clinical Mass Spectrometry, Harbor Court Hotel, Baltimore. Fee: $150 for the lectures, $50 for the workshops; 10 AMA Cat I credits.

Oct 9 Current Concepts in Ophthalmology: Seventh Annual Clinical Conference, Hyatt Regency, Baltimore. A memorial lecture honoring Lois A. Young-Thomas MD will be included in the program. Fee: $60; 6 AMA Cat I credits.

Oct 9–10 Cardiology for the Future: A View from the University of Maryland, Sheraton Inner Harbor Hotel, Baltimore. Fee and credits TBA.

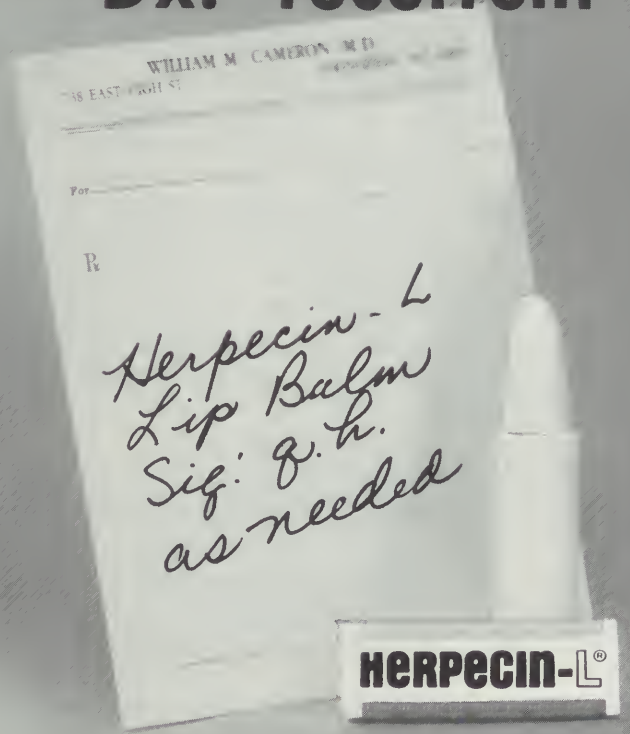
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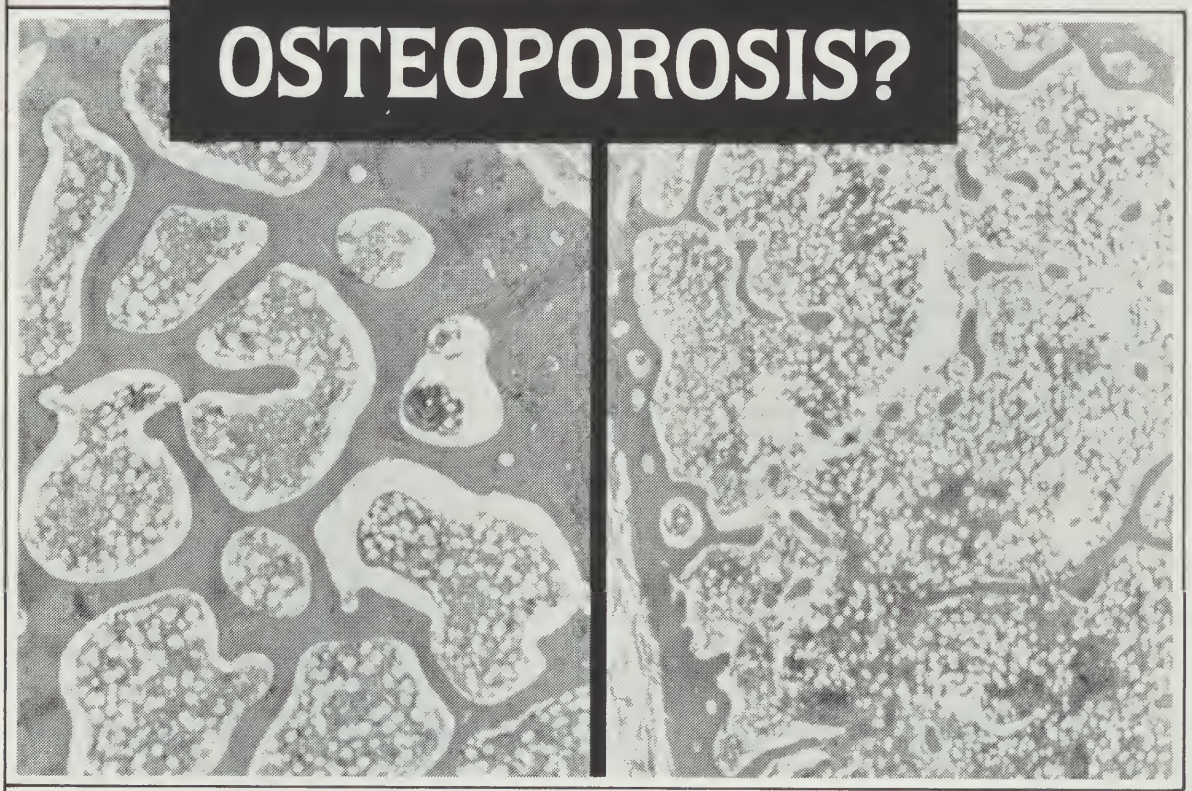
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Physicians wishing to locate in Maryland are invited to submit a resumé to be kept on file with the Physician Placement Service. Candidates are requested to inform the Faculty when they are no longer available for consideration for opportunities which might be available in Maryland.

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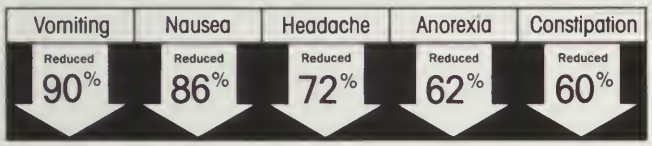
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Warnings: Use with great care in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur in patients taking tricyclic antidepressants and anticholinergic-type drugs. Closely supervise cardiovascular patients. (Arrhythmias, sinus tachycardia and prolongation of conduction time reported with use of tricyclic antidepressants, especially high doses. Myocardial infarction and stroke reported with use of this class of drugs.) Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving).

***Usage in Pregnancy:* Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Since physical and psychological dependence to chlordiazepoxide have been reported rarely, use caution in administering Limbitrol to addiction-prone individuals or those who might increase dosage; withdrawal symptoms following discontinuation of either component alone have been reported (nausea, headache and malaise for amitriptyline; symptoms [including convulsions] similar to those of barbiturate withdrawal for chlordiazepoxide).
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Adverse Reactions: Most frequently reported are those associated with either component alone: drowsiness, dry mouth, constipation, blurred vision, dizziness and bloating. Less frequently occurring reactions include vivid dreams, impotence, tremor, confusion and nasal congestion. Many depressive symptoms including anorexia, fatigue, weakness, restlessness and lethargy have been reported as side effects of both Limbitrol and amitriptyline. Granulocytopenia, jaundice and hepatic dysfunction have been observed rarely.
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Psychiatric: Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania and increased or decreased libido.
Neurologic: Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns.
Anticholinergic: Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract.
Allergic: Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus.
Hematologic: Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia.
Gastrointestinal: Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue.
Endocrine: Testicular swelling and gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion.
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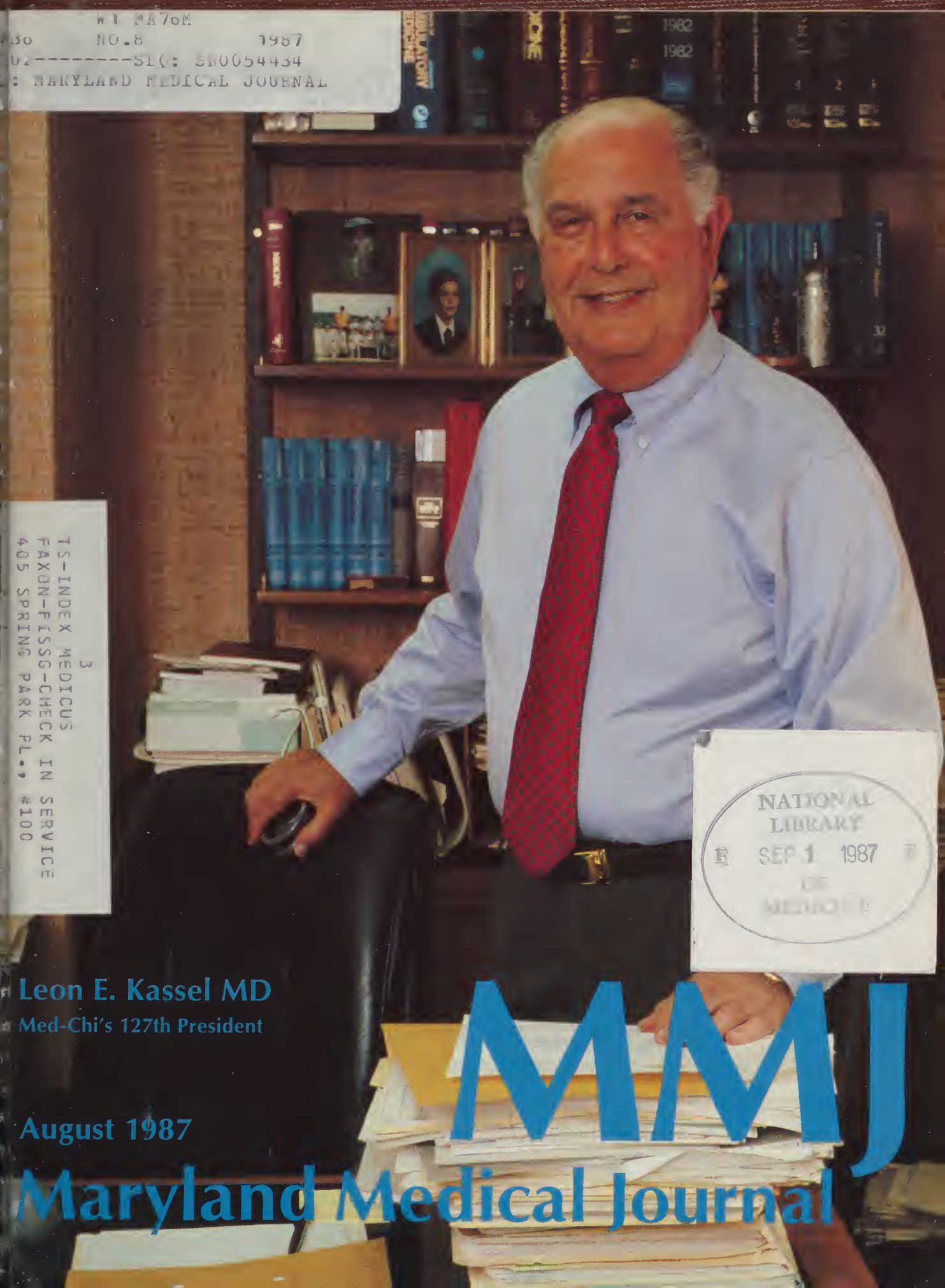
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Leon E. Kassel MD

Med-Chi's 127th President

MMJ

August 1987

Maryland Medical Journal

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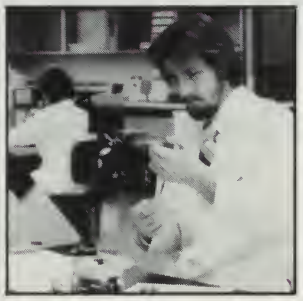
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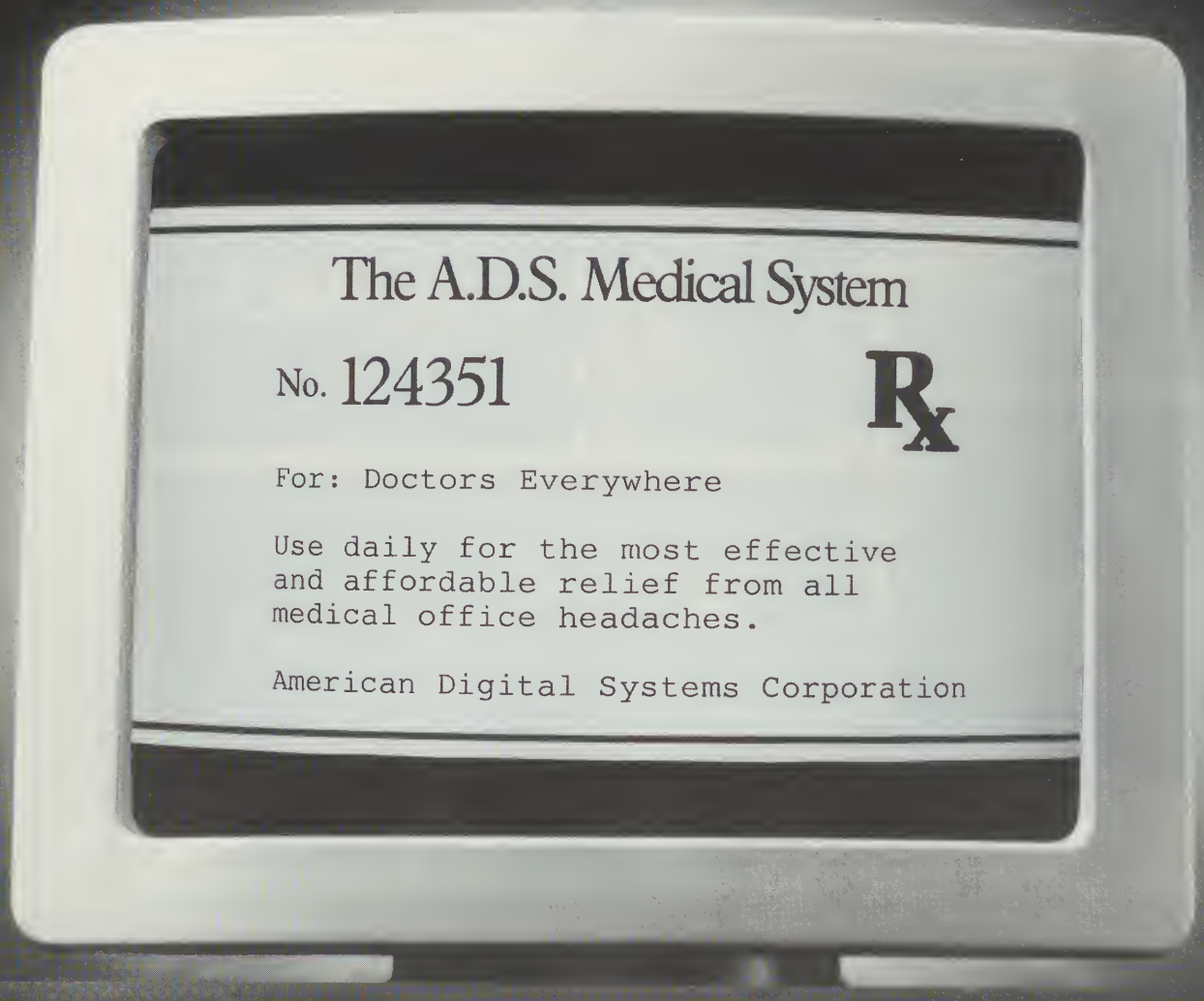
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On the cover: Med-Chi's President Leon E. Kassel MD is Associate Chief of the Department of Medicine and Director of the Ambulatory Medicine Program at Sinai Hospital, Baltimore, and is in the private practice of Internal Medicine. (All photos in this issue are by TADDER/Baltimore.)

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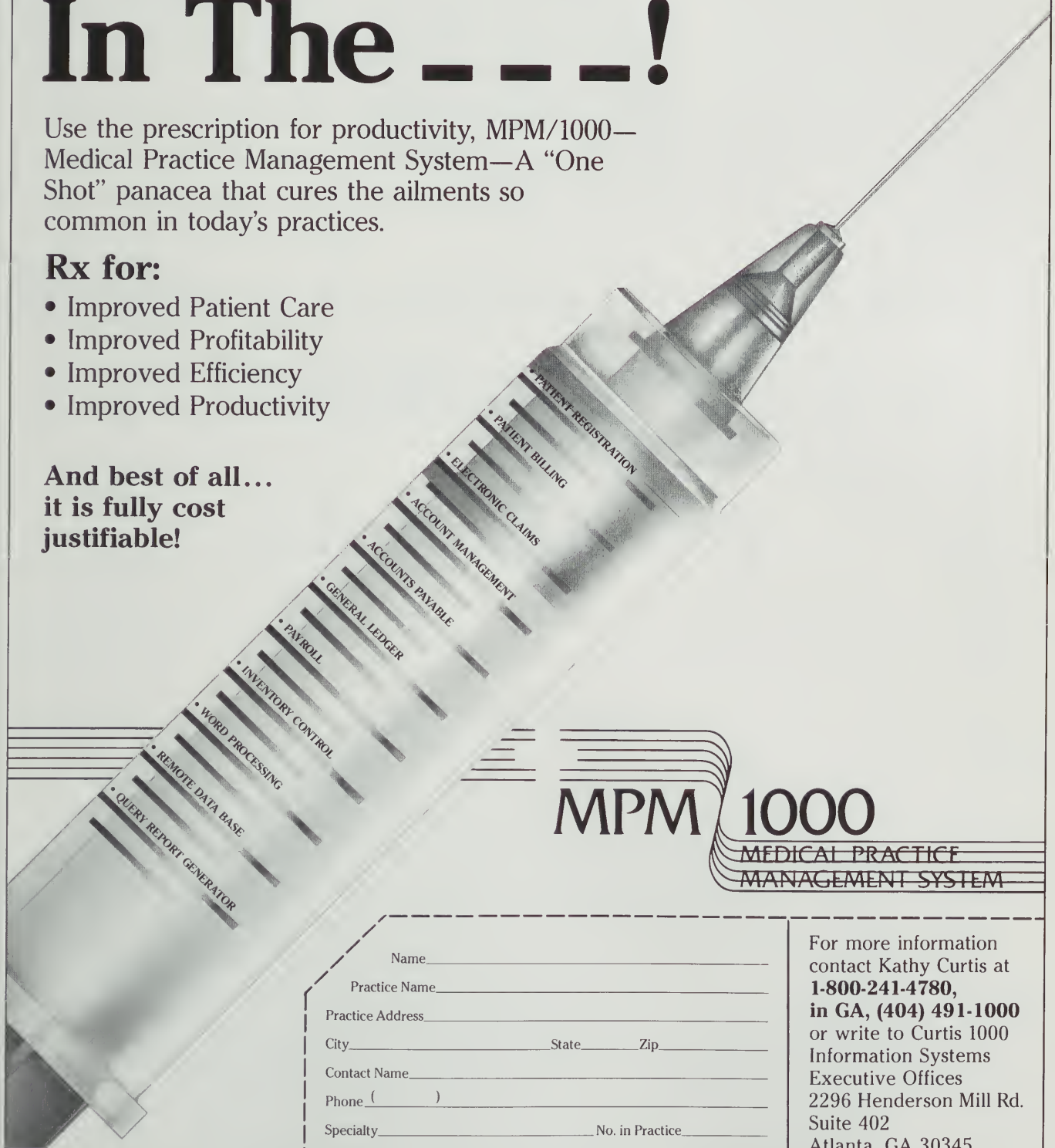
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AUGUST 1987

HIGHLIGHTS FROM THE IMMUNIZATION PRACTICES ADVISORY COMMITTEE (ACIP)

MEASLES PREVENTION

REVACCINATION:

Persons vaccinated with live measles vaccine before their first birthday should be identified and revaccinated. Persons vaccinated with inactivated vaccine (available in the U.S. from 1963 to 1967) and persons vaccinated with inactivated vaccine followed within three months by live vaccine should be revaccinated to prevent atypical measles syndrome. Revaccination is particularly important when exposure to natural measles virus is considered likely. There is no evidence of enhanced risk from receiving live measles vaccine in persons who have previously received live measles vaccine or had measles. Specifically, there does not appear to be any enhanced risk of SSPE (subacute sclerosing panencephalitis).

VACCINATION FOR MEDICAL PERSONNEL:

Medical personnel are at higher risk for acquiring measles than the general population. Medical facilities should ensure that all employees born **after** 1956 have proof of immunity. Since a substantial proportion of medical personnel who have acquired measles were born **before** 1957, medical facilities may also consider requiring proof of measles immunity for older employees who may have occupational exposure to measles.

ALLERGIES:

Evidence indicates that persons with egg allergies that are not anaphylactoid in nature, or those with allergies to chicken or feathers, are not at increased risk of reaction to the vaccine. Since measles vaccine contains trace amounts of neomycin, persons who have experienced anaphylactoid reactions to topically or systemically administered neomycin should not receive measles vaccine. A history of contact dermatitis to neomycin is not a contraindication to receiving measles vaccine. Live measles virus vaccine does not contain penicillin.

INTERNATIONAL TRAVEL:

Persons traveling abroad should be immune to measles. Since the risk of serious complications and death is greater for adults than for children, it is especially important to protect young adults who have escaped measles and have not been vaccinated. Also, because measles vaccine is not 100% effective and because the risk of exposure to measles abroad may be substantially greater than in the United States, consideration should be given to providing a **one-time dose of measles vaccine to persons born after 1956 who travel abroad regardless of their previous vaccination status, unless there is a contraindication.** Persons born before 1957 need not be considered susceptible. If single antigen measles vaccine is not readily available, travelers should receive MMR regardless of their status to mumps and rubella.

The age for measles vaccination should be lowered for children traveling to areas where measles is endemic or epidemic. Children 12-14 months of age should receive MMR vaccine before their departure (without need for revaccination). Children 6-11 months of age should receive a dose of single-antigen measles vaccine before departure and subsequently should receive MMR vaccine. Whereas the optimal age for revaccination is 15 months, the age for revaccination may be as low as 12 months if the child remains in a high-risk area. Since virtually all infants < 6 months of age will be protected by maternally derived antibodies, no additional protection against measles in this age group is generally necessary.

INFLUENZA VACCINATION

November is the optimal time for organized vaccination campaigns in chronic-care facilities, worksites, and other places where high-risk persons are routinely accessible. Vaccination is desirable in September or October 1) in regions that have experienced earlier-than-normal epidemic activity (e.g., Alaska) and 2) for persons who should be vaccinated and who received medical check-ups or treatment during September or October and, thus, may not be seen in November. In addition, hospitalized high-risk adults and children who are discharged between September and the time influenza activity begins to decline in their community should be vaccinated as part of the discharge procedure.

The target **high-risk** population includes:

1. Adults and children with chronic disorders of the cardiovascular or pulmonary systems requiring regular medical follow up or hospitalization during the preceding year.
2. Residents of nursing homes and other chronic care facilities housing patients of any age with chronic medical conditions.

The **moderate risk** population includes:

1. Otherwise healthy persons >65 years of age.
2. Adults and children who have required regular medical care and hospitalization during the preceding year because of chronic metabolic disorders (including diabetes mellitus), renal dysfunction, anemia, or immunosuppression.
3. Children and teenagers (6 months - 18 years) on chronic aspirin therapy.

Persons capable of nosocomial transmission to high risk population:

1. Physicians, nurses and health care providers who have extensive contact with high risk patients.
2. Health care providers of high risk patients in the home setting (visiting nurses, volunteer workers), as well as all household members, whether or not they provide care.

Persons who should not be vaccinated:

1. Inactivated influenza vaccine should not be given to persons who have severe allergies to eggs. Persons with acute febrile illnesses should not be vaccinated until their temporary symptoms have abated.
2. Pregnancy--influenza vaccine is considered safe for pregnant women without a specific severe egg allergy. To minimize any concern over theoretical possibility of teratogenicity vaccine should be given after the first trimester. It is undesirable to delay vaccinating a pregnant woman who has a high risk condition and will still be in the first trimester when influenza activity usually begins.

Side Effects:

1. Because influenza vaccine contains only killed virus, it cannot cause influenza.
2. Fever, malaise, myalgia most often occur in persons with no previous influenza virus antigen exposure (i.e., children). Reactions begin 6-12 hours after vaccination and can persist 1-2 days.
3. In extremely rare instances, allergic reactions, such as hives, angioedema, allergic asthma, anaphylaxis may occur.

HEPATITIS B VACCINATION

In July 1986, a new genetically engineered HB vaccine was licensed by the FDA. This vaccine has an immunogenicity comparable to that of the currently available plasma-derived vaccine. The two vaccines are also comparably effective when given with HBIG to prevent perinatal HBV transmission.

The indications for use of the recombinant HB vaccine are identical to those for the plasma-derived product (see table) except that it should not be used for hemodialysis patients or immunosuppressed patients. For other persons, including those with Down's syndrome, there are no data to suggest that recombinant HB is superior or inferior to plasma-derived HB vaccine. Pregnancy should not be considered a contraindication for women in high-risk groups who are eligible to receive this vaccine. The recombinant HB vaccine contains only noninfectious HBsAg particles; therefore, vaccination of a pregnant woman should entail no risk to either the woman or the fetus.

DOSAGE AND SCHEDULE:

The recombinant HB vaccine is given in a series of three doses over a 6-month period. The second dose is administered one month after the first and the third dose, five months after the second. For normal adults and children >10 years of age, the recommended dose is 10 μg (1 ml) in the deltoid muscle in each of the three inoculations. Children <11 years of age should receive a 5-μg dose (0.5 ml) by the

same schedule. Newborns of mothers who are carriers of HBsAg should receive the three-dose series (5 μg per dose) by the same schedule; however, the first dose, which is given at birth, should be combined with a single dose of HBIG (0.5 ml) given in the anterolateral thigh muscle at another site. The vaccine should be stored at 2°C to 6°C (36°F to 43°F) and should not be frozen.

BOOSTER DOSES:

For adults and children with normal immune status, the antibody response to properly administered vaccine lasts for at least 5 years. Booster doses of vaccine are not routinely recommended, nor is routine serologic testing to assess antibody levels in vaccine recipients necessary during this period.

For hemodialysis patients, in whom vaccine induced protection is less complete and may persist only as long as antibody levels remain about 10 mIU/ml, the need for booster doses should be assessed by semiannual antibody testing and given when antibody levels decline below 10 mIU/ml.

ADVERSE EFFECTS:

Reported adverse effects in the prelicensure trials include soreness at the site of injection (17%), mild systemic symptoms, including fever, headache, fatigue and nausea (15%).

TABLE 1. Persons for whom hepatitis B vaccine is recommended or should be considered*

Preexposure

Persons for whom vaccine is recommended:

-- Health-care workers having blood or needle-stick exposures
-- Clients and staff of institutions for the developmentally disabled
-- Hemodialysis patients**
-- Homosexually active men
-- Users of illicit injectable drugs
-- Recipients of certain blood products
-- Household members and sexual contacts of HBV carriers
-- Special high-risk populations

Persons for whom vaccine should be considered:

-- Inmates of long-term correctional facilities
-- Heterosexually active persons with multiple sexual partners
-- International travelers to HBV endemic areas

Postexposure

-- Infants born to HBV positive mothers
-- Health-care workers having needle-stick exposures to human blood

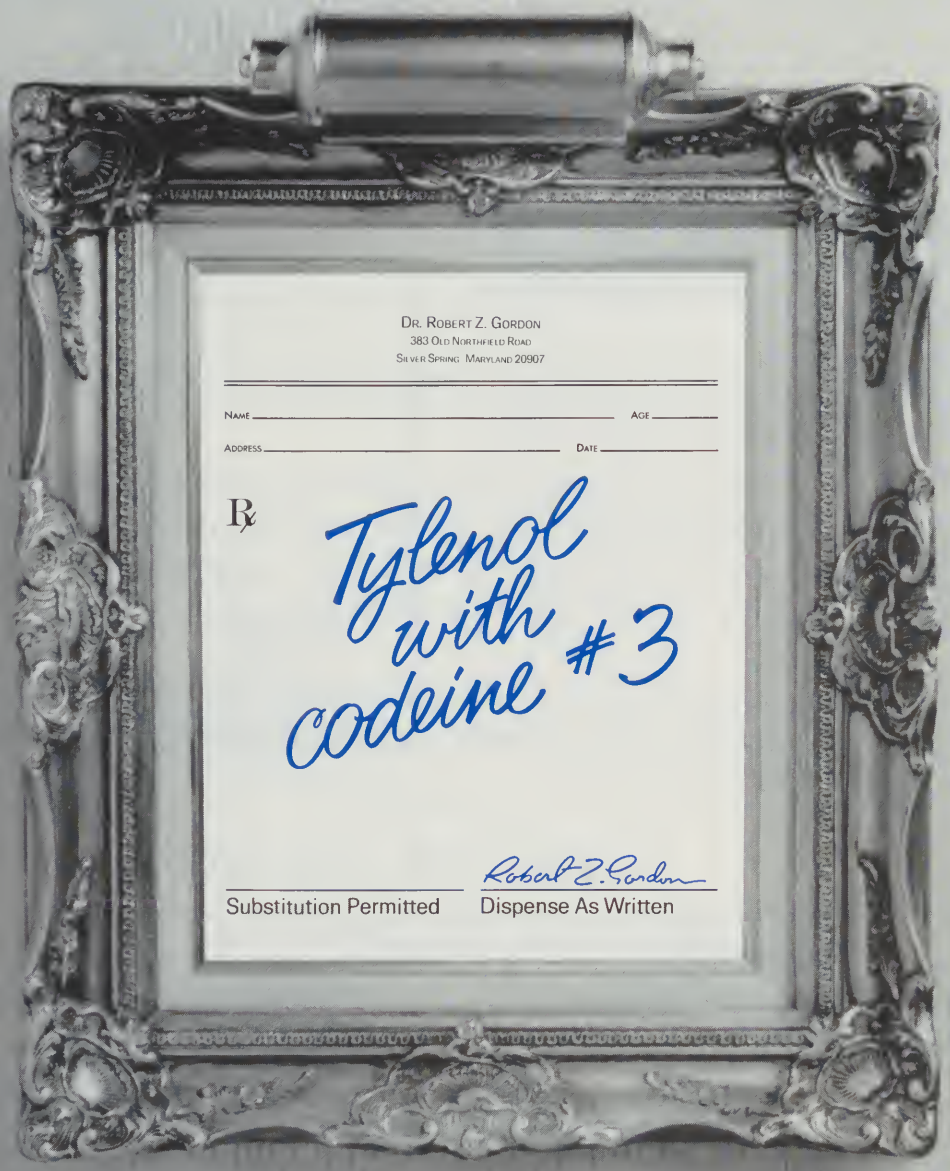
*Detailed information on recommendations for HB vaccination is available.

**Use only plasma-derived HB vaccine.

SOURCE:

Sherry Mills, M.D., M.P.H., Resident in Preventive Medicine, Johns Hopkins University School of Hygiene and Public Health, adapted the above information from the Centers for Disease Control (CDC), MMWR, Vol. 36, N:23/June 19, 1987, N:24/June 26, 1987, and N:26/July 10, 1987.

ERRATUM: The year in the title of the report in the June 1987 newsletter should read 1986.



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A specialty Alzheimer Disease Care Unit has been created at Meridian Nursing Center—Heritage in consultation with The Johns Hopkins University Medical Institutions to develop innovative approaches to care. To advance this research, Meridian funds an Alzheimer Disease Research Fellowship in The Johns Hopkins University Department of Psychiatry.

Alzheimer Disease is a little understood, even frightening facet of aging about which more public information is needed. To address this need, Meridian Healthcare has produced a booklet on Alzheimer. This guide will be offered free in commercial radio broadcast advertising as part of Meridian's continuing public information campaign.

Our concern with Alzheimer Disease is only one of many ways Meridian Healthcare is different. For more detailed information on our Alzheimer program or on any of our 13 Nursing Centers in Maryland, call or send the coupon for our free *Referrer's Guide*.

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Executive Director's Newsletter

August 1987

PHYSICIANS RELIANCE GROUP

On July 17, 1987, Leon E. Kassel MD, President of the Faculty, sent a memorandum to all Faculty members concerning liability insurance coverage offered by Physicians Reliance Group, Inc. The memo was a response to many telephone calls the Faculty received about this organization. If you desire a copy of this memorandum, please call the Faculty at 539-0872 or toll free 1-800-492-1056.

The purpose of the memorandum was neither to endorse nor to discourage selection of one insurance program over another, but merely to present certain facts that have come to our attention. We hope these facts will help you should a decision about liability insurance coverage be in your future.

As an update to the President's July 17 memo, we provide the following information:

- The Physicians Reliance Group is still under an order from Insurance Commissioner Edward J. Muhl to refrain from selling insurance policies to physicians in Maryland pending investigation.

- An independent actuarial firm has been contracted to provide an analysis for the Insurance Commissioner. This report is due to the Commissioner in late August.

Please don't hesitate to contact the Faculty with questions or concerns you may have about the Physicians Reliance Group, Inc. If you wish to ask specific questions of the Maryland Insurance Commission, contact Frank Nayden of that office at 333-6161.

BUILDING DEDICATION

The dedication of the new Faculty Building will be held on Saturday, September 26, 1987 at 1 p.m. prior to the Semiannual session of the House of Delegates (SEE INVITATION ON NEXT PAGE). Some of the special invited guests include Governor William Donald Schaefer, President of the Senate Thomas V. Mike Miller, and Speaker of the House Clayton Mitchell, Jr.

Light lunch and tours of the building will be offered beginning at 12 noon. Free parking will be available at the Symphony Parking Garage located on the corner of Preston and Cathedral Streets. To receive free parking, have your parking sticker validated at the Reception desk at the front entrance of the new building. The new entrance is one door south of the 1211 Cathedral Street entrance.

CONGRESSIONAL ACTIONS

The DRG proposal involving radiologists, anesthesiologists, and pathologists has been deleted from the House Ways and Means Committee budget reconciliation bill. The Committee also rejected proposals to establish a special fee schedule with possible mandated assignment for radiologic services. The Committee did approve a 2% Medical Economic Index (MEI) increase for participating physicians and a 1% MEI increase for nonparticipating physicians.

Similar proposals are under consideration by the House Energy and and Commerce Committee. By the time you receive this newsletter, this committee should have voted on these issues.

INSURANCE ALERT

The Maryland Insurance Division recently received information indicating that Professional Risk Insurers Management Exclusive Company, Ltd. is soliciting physicians for medical malpractice insurance in the State of Maryland. PRIME has not been issued a Certificate of Authority in Maryland, and therefore no guarantees can be made about either the company's liquidity, product quality, safety, or ability to satisfy claims. PRIME does not have local agents, claims offices, or legal counsel in Maryland, and physicians entering into contracts of insurance are advised that they do so at their own risk.

OCTOBER WORKSHOPS

In October, Med-Chi will sponsor two workshops presented by nationally recognized Conomikes Associates. The first, "How To Improve Third-Party Reimbursement and Coding," will be held in Bethesda on Tuesday, October 20 and in Hunt Valley on Wednesday, October 21. This extensive one-day workshop, will teach the techniques of the experts compiled from years of consulting and research with the widest variety of physicians.

The second workshop, "How to Get Started in Medical Practice," will be held at Mariott's Hunt Valley Inn on Thursday and Friday, October 22-23. This two-day practice management workshop is designed for physicians who plan to go solo, join a partnership or group practice, or just need direction on which way to go.

For registration and additional information call Rae Cary at the Faculty offices, 539-0872 or toll-free in Maryland, 800-492-1056.

CPT 1987

Physicians' Current Procedural Terminology (CPT-1987) is available through Med-Chi. These codes are used by many private insurance Medicaid carriers as well as the federal government for Medicare Part B. Price is $30 per copy. To order the CPT-1987, send a check payable to the "Med-Chi Library" ATTN: CPT Order.

Angelo J. Troisi
Executive Director

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Saturday, September 26, 1987

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MR UPDATE

MRI is Rapidly Replacing CT & Myelography For Evaluation of HNP

LUMBAR SPINE



HISTORY: This 38-year-old male complained of recent onset of low back pain radiating to left lower extremity.

SCAN: This midline sagittal image demonstrates the high intensity (white) discs lying between the vertebral bodies. The L4-5 disc is herniated posteriorly with a "mushroom configuration" (long arrow). CSF in the spinal canal is gray (short arrow), and this CSF column is indented by the herniated disc material at the L4-5 level (long arrow). Axial images at the other levels demonstrated that the high intensity disc material is contained, and disc herniation can be confidently excluded at all the other levels.

MRI HIGHLIGHTS: Lumbar and cervical surface coil MRI is rapidly replacing myelography and computerized tomography for initial evaluation of suspected disc herniation and suspected spinal stenosis. Standard MR examination shows the entire lumbar or cervical spine, the spinal canal and the paraspinal region. Causes of low back or neck pain and sciatica are well demonstrated without injection of contrast material and without ionizing radiation. The bony structures are well shown, and destructive bony lesions and extraosseous extension of bony lesions are routinely demonstrated on MRI. Intraspinal neoplasms are also confidently detectable.

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Executive Committee and Council Actions

Council—April 29, 1987

• **Approval of Minutes** The following minutes were acted upon: Minutes approved: Council, February 12 and March 19, 1987. Actions accepted: Executive Committee, January 8, February 12, March 19, and April 16, 1987.

Questions were raised regarding the potential need to address various roles and relationships, i. e., the Executive Committee to the Council and the Council to the House of Delegates. Further discussion ensued and the following motion was passed:

> That the Chairman of the Council set up an ad hoc committee to study the entire governance of the organization and the relationship between the Executive Committee, the Council, and the House of Delegates . . .

• **Blue Cross/Blue Shield National Diagnostic Guidelines** Following considerable discussion, Council directed that Council Chairman appoint a task force to study these guidelines and report to Council with a recommendation within three months.

• **Update on IPA Activities** Leon E. Kassel MD, Chairman, updated Council on recent developments. He explained that the Task Force had been working under time constraints due to the Champus program deadlines, but more time is now available for further Task Force study since the Champus program deadlines have been moved back considerably.

Raymond M. Atkins MD mentioned that preliminary discussion with the Maryland Foundation for Health Care had taken place regarding incorporating their existing review functions into any new organization. He encouraged continued consideration of this option.

The IPA Task Force will reconvene after a new chairman has been appointed.

• **Statement on AIDS** Council approved the following statement on AIDS to be presented to the House of Delegates with a recommendation for approval:

> The Physicians of Maryland strongly encourage all school boards of Maryland to incorporate AIDS education into their curriculum beginning at 3rd grade level in concurrence with the Surgeon General's report on AIDS. We believe it is in the interest of the health of citizens of this State and we stand ready to assist in the development of such curricula.

• **Maryland Health Convocation** After vigorous discussion concerning Med-Chi's participation in the Maryland Health Convocation, a motion was passed to table the matter for discussion at the May 21 Council meeting. Staff was directed to identify the purpose and determine the financial status of the Convocation for presentation to Council on May 21.

• **MMLR** The following recommendation was presented for Council's consideration:

> The Executive Committee reviewed the relationships between Med-Chi and MMLR and recommends that the Council thank MMLR for their past efforts and that further relationships be discontinued.

The motion to adopt this recommendation was made, seconded, and passed unanimously.

• **Blue Cross/Blue Shield "Caring Program"** Council was informed that the Executive Committee is continuing to study and evaluate this proposed program.

• **Emeritus Membership** Council approved Emeritus membership for the following physicians at the request of the component society indicated:

Anne Arundel County	Edward S. Beck MD Annapolis
	Philip Briscoe MD Annapolis
	Hubert F. Manuzak MD Glen Burnie
	Pamela R. Moore MD Annapolis
Baltimore County	William D. Gentry, Jr., MD Baltimore
	Vernon C. Kelly MD Baltimore
	George J. Richards MD Baltimore
Montgomery County	Dorothy Gill MD Bethesda
Talbot County	E.C.H. Schmidt MD Easton

• **Nominees for Commission on Kidney Disease** The Chairman announced that nominees were being sought for possible appointment to this Commission.

• **Outgoing Council Members** Council members whose terms expire with this meeting were asked to stand and be recognized and were applauded for their past contributions to the Faculty while serving on the Council.

Council—May 1, 1987

• **Introduction of New Members** These new Council members were introduced:

David S. O'Brien MD, Anne Arundel County
Paul Bormel MD, Baltimore City
Charles F. Hoesch MD, Baltimore County
Lawrence A. Jones MD, Washington County
Hilary T. O'Herlihy MD, 3rd Vice-President, 1986–87

• **Election of Chairman** President Leon E. Kassel MD requested nominations for the post of Council Chairman. The name of Reynaldo Lee-Llacer MD, Prince George's County, was placed in nomination. There being no other candidates, Dr. Lee-Llacer was elected unanimously.

• **Election of Vice-Chairman** Dr. Kassel continued with a call for nominations for the post of Vice-Chairman. J. David Nagel MD, Baltimore County, was nominated for Vice-Chairman. There being no other candidates, Dr. Nagel was elected unanimously.

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Doctors Take Note

The Johns Hopkins Medical Institutions

All courses at the Turner Auditorium Building unless otherwise indicated. Sponsored Continued Education Activities for 1987-88. Info: Office of Continuing Education, 720 Rutland Ave., Turner Auditorium, Baltimore, MD 21205 (301-955-5880).

Sep 12–14 Written Board in Emergency Medicine: An Accelerated Review, Omni International, Baltimore. Fee: $375; 24 AMA Cat I credits. Info: C. Sentman 301-955-6085.

Sep 17–18 Pediatrics for the Practitioner—Update '87. Fee: physicians, $190; nurse/practitioners and retired physicians, $125; 13 AMA Cat I credits. Info: J. Ryan.

Sep 18–20 Diagnostic Ultrasound in Obstetrics and Gynecology, Baltimore Marriott, Inner Harbor Hotel. Fee: $325 physicians, $250 sonographers/RNs; 19 AMA Cat I credits, ACOG cognates available, ASRT credit. Info: C. Kearney 301-955-3168.

Oct 7–10 Triennial Meeting of the International Society for the Study of Brain Edema, Sheraton Inner Harbor, Baltimore. Fee: $100; AMA Cat I credits to be awarded. Info: D. Heydinger 301-955-6046.

Oct 12–14 Laser Angioplasty and Interventional Radiology. Fee: $400 physicians, $200 residents, nurses, techs; 25 AMA Cat I credits. Info: C. Kearney 301-955-3168.

Oct 15–17 Thirteenth Annual Topics in Gastroenterology and Liver Disease. Fee: $340 physicians, $170 residents and fellows (with letter verifying status); 20.5 AMA Cat I credits. Info: J. Ryan 301-955-6046.

Oct 23 Diabetic Retinopathy in 1987. Fee: $175, $90 (those in training); 8 AMA Cat I credits. Info: D. Heydinger 301-955-6046.

Oct 26–27 Noise-Induced Injury and Ototoxicity: An Update, Department of Environmental Health Sciences, The Johns Hopkins University School of Hygiene and Public Health. Info: C. Walsh 301-955-2609.

Oct 26–30 Twenty-ninth Annual Emil Novak Memorial Course: Gynecology, Gynecologic Pathology, Endocrinology, and Obstetrics. Fee: $550 physicians, $400 residents; 44 AMA Cat I credits. Info. C. Kearney 301-955-3168.

Nov 4–5 Progress in *in vitro* Toxicology, sponsored by The Johns Hopkins Center for Alternatives to Animal Testing. Fee: Before Oct 2—$225, thereafter—$275; 15 AMA Cat I credits, 1.5 CEU. Info: J. Ryan 301-955-6046.

Nov 9–14 First International Congress on Oral Cancer and Jaw Tumors, co-sponsored by the World Health Organization and the International Union Against Cancer; organized by the Division of Oral and Maxillofacial Surgery, The Johns Hopkins Medical Institutions in conjunction with the Department of Oral and Maxillofacial Surgery of the National University of Singapore. Congress Coordinator: Dr. Robert W. VanBoven, The Johns Hopkins Medical Institutions 301-955-2083 or 955-6664.

Dec 7–9 International Neuroradiology: Current Practices and Technique. Fee: $500 physicians, $400 technicians; 22.5 AMA Cat I credits. Info: C. Kearney 301-955-3168.

Johns Hopkins Medical Grand Rounds: audiocassettes, slides, and booklet. 30 topics and 40 AMA Cat I credits/year. Contact 301-955-3988, Office of Continuing Education, 720 Rutland Ave., Baltimore, MD 21205.

Ophthalmic Electrophysiology Technician Training Course (on-going 1-week course by appointment), The Wilmer Eye Institute, Baltimore. Info: C.M. Kearney.

The Department of Radiology and Radiological Sciences offers several courses in abdominal and obstetrical ultrasound: Courses scheduled 1/12/87–12/7/87. Info: J. Mosmiller 301-955-8450.

Basic Practicum, Nov 16–20. Fee: $460; 40 AMA Cat I credits.

Advanced Practicum in Ultrasound. Dec 7–11. Fee: $460; 40 AMA Cat I credits.

Visiting Physicians is offered throughout the year, by appointment only. Fee: $460, 40 AMA Cat I credits.

• • •

University of Maryland School of Medicine

CME Courses: For each course additional information may be obtained by contacting Program of Continuing Education, University of Maryland School of Medicine, Room 300, MSTF, 10 South Pine St., Baltimore, MD 21201 (301-328-3956).

Sep 11 Perinatal AIDS Symposium, Omni International Hotel, Baltimore (half-day program). Fee: $50; 3 AMA Cat I credits.

Sep 11–12 Urologic Surgery, Omni International Hotel, Baltimore. Fee: $175; 11.5 AMA Cat I credits.

Sep 17 Update on the Menopause: Contemporary Clinical Issues, International Hotel at BWI. Fee: $25; 5.5 AMA Cat I credits.

Sep 18–20 Clinical Monitoring in Anesthesiology, Harbor Court Hotel, Baltimore. Fee: $350 lectures & workshops, $250 lectures only; 9.5 AMA Cat I credits.

Sep 25 Obstetrics for the 90s. Fee: $25; 5.75 AMA Cat I credits.

Oct 9 Current Concepts in Ophthalmology: Seventh Annual Clinical Conference, Hyatt Regency, Baltimore. A memorial lecture honoring Lois A. Young-Thomas MD will be included in the program. Fee: $60; 6 AMA Cat I credits.

Oct 9–10 Cardiology for the Future: A View from the University of Maryland, Sheraton Inner

Harbor Hotel, Baltimore. Fee and credits TBA.

Oct 14 Topics in Diagnostic Radiology. Fee: $25; AMA Cat I credits TBA.

Nov 6–7 Medical Perioperative Management, Harbor Court Hotel, Baltimore. Fee: TBA; 11 AMA Cat I credits.

Nov 18 Cancer Management. Fee: $25; AMA Cat I credit TBA.

Nov 28, 1987, Jan 16, and Feb 27, 1988 Neurology and Music at Maryland. Fee: $150; 9.75 AMA Cat I credits. Info: Dr. Kenneth Johnson, Department of Neurology, University of Maryland Hospital, 22 S. Greene St., Baltimore, MD 21201 (301-328-6484).

Visiting Professor Program—Director of speakers and topics available for area hospitals and other health care organizations. An administrative fee is charged. Info: 301-328-3956.

Visiting Practitioner Preceptorships—Opportunity for physicians to participate in clinical situations in the University of Maryland Medical Systems. Requires approval from clinical department/division heads. Direct inquiries to CME. Hour-for-hour AMA Cat I credits.

Departmental Rounds and Conferences—September through June— Hands-on opportunities for practicing physicians including weekly lectures and discussions by sponsoring departments/divisions. Hour-for-hour AMA Cat I credits. Brochure available.

1987–1988 Calendar of Courses is available. Send requests to above address. Begin to plan your continuing education activities now.

• • •

Miscellaneous Meetings

Sep 8–11 International Organ Transplant Forum sponsored by Presbyterian-University Hospital of Pittsburgh, the Junior League of Pittsburgh, The University of Pittsburgh, and Children's Hospital of Pittsburgh; and held at Pittsburgh's David L. Lawrence Convention Center and Vista International Hotel. Info: A. Metzger, Chairperson of Public Relations, Committee for Organ Transplant Forum, DeSoto at O'Hara Sts., Pittsburgh, PA 15213 (412-647-7723).

Sep 10–11 NIH Technology Assessment Workshop on the Health Benefits of Pets, Masur Auditorium, Warren Grant Magnuson Clinical Center, NIH, Bethesda, Info: S. Feldman, Prospect Assoc., Ste 500, 1801 Rockville Pike, Rockville, MD 20852 (301-468-6555).

Sep 16–17 PET/SPECT: Instrumentation, Radiopharmaceuticals, Neurology, and Physiologic Measurement, Shoreham Hotel, Washington, DC. Symposium is first in series "Frontiers in Nuclear Medicine" and "Nuclear Medicine Practice," funded by U.S. Department of Energy's Office of Health and Environmental Research, Office of Energy Research. Info: American College of Nuclear Physicians, Ste 700, 1101 Connecticut Ave. NW, Washington, DC 20036 (202-857-1135).

Sep 28–30 Community Re-Entry Following Head Injury—Return to Work, School, Family, and Social Life for Adults and Children, sponsored by the Rehabilitation Institute of Pittsburgh, at the Vista Hotel, Pittsburgh, PA. Info: Training Dept, Rehabilitation Institute of Pittsburgh, 6301 Northumberland St., Pittsburgh, PA 15217 (412-521-9000).

Oct 10–11 Regional Review Course in Hand Surgery to be held in Philadelphia, PA. Credits: 12 hrs; info: T. Harrington, American Society for Surgery of the Hand, 3025 S. Parker Rd., Ste. 65, Aurora, CO 80014 (303-755-4588).

Oct 19–21 NIH Consensus Development Conference: Geriatric Assessment Methods for Clinical Decision Making, Masur Auditorium, Warren Grant Magnuson Clinical Center, NIH, Bethesda. Info: M. Bernstein, Prospect Assoc., St. 500, 1801 Rockville Pike, Rockville, MD 20852 (301-468-6555).

Oct 22–24 New Techniques and Concepts in Cardiology, Washington, DC. Fee: $350, ACC members; $395, nonmembers; $175, residents, fellows in training, nurses and technicians. 16 Cat I credits. Info: American College of Cardiology 800-253-4636, 301-897-5400, ext 226 (MD and AK).

Oct 26–28 NIH Consensus Development Conference: Magnetic Resonance Imaging, Masur Auditorium, Warren Grant Magnuson Clinical Center, NIH, Bethesda. Info: S. Feldman, Prospect Assoc., St. 500, 1801 Rockville Pike, Rockville, MD 20852 (301-468-6555).

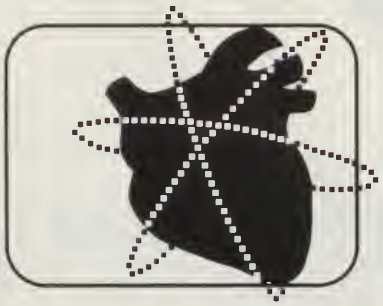
Nov 19–21 Tenth National Trauma Symposium: Challenges of the '90s, Baltimore Convention Center. Info: P. McAllister, MIEMSS, 22 S. Greene St., Baltimore, MD 21201 (301-328-2399).

Future Med-Chi Meetings

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January 1988
Maui, Hawaii

1988 Annual
April 27–29
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1988 Semiannual
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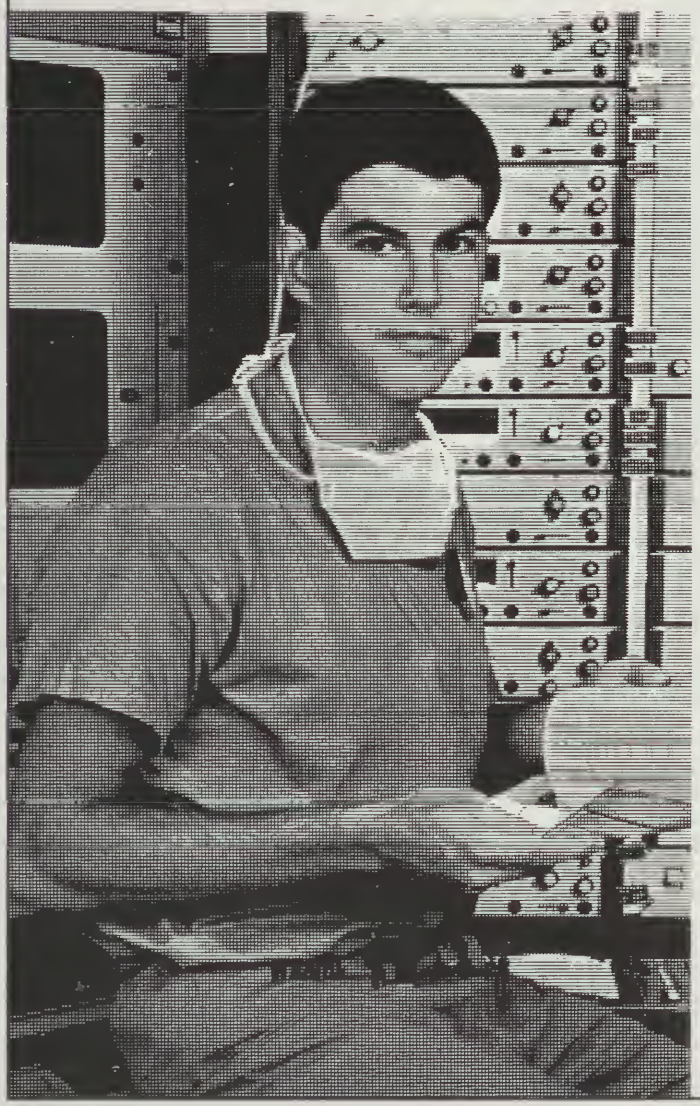
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Baltimore born and bred, Leon E. Kassel MD brings to the office of President a broad background. Practitioner; teacher of students, residents and patients; and administrator, Dr. Kassel's checkered formal education foreshadowed his present diverse activities.

Because he started college when he was 16, he had completed three years toward a teacher's degree by the time he enlisted early in World War II. Taking advantage of military educational programs, he studied two years toward an engineering degree before an aptitude test pointed the way to medical school at the University of Virginia, from which he received his MD in 1949. He was certified by the American Board of Internal Medicine in 1957 and again in 1977, and is a Fellow of the American College of Physicians.

Except for service in the U.S. Air Force from 1952 to 1954, Dr. Kassel has practiced in Baltimore. Currently he is the Associate Chief of the Department of Medicine and Director of the Ambulatory Medicine Program at Sinai Hospital, and is in the private practice of Internal Medicine. Additionally, he serves as an assistant professor in the Department of Epidemiology and Preventive Medicine at the University of Maryland Medical School and as an instructor in Medicine at the Johns Hopkins School of Medicine.



Dr. Kassel is a member of the Alpha Omega Alpha Honor Medical Society, the American Society of Internal Medicine, the American Federation for Clinical Research, the Association of Teachers of Preventive Medicine, the American College of Physicians, the Baltimore City Medical Society, and the American Medical Association.

Long active in medical society leadership, Dr. Kassel is a former president of the Baltimore City Medical Society, and past Chairman of the Council and Executive Committee of the Medical and Chirurgical Faculty. Appointed by Governor Harry Hughes to serve as a Commissioner of the Maryland Commission on Medical Discipline in 1985, he also served on the Governing Council of the Central Maryland Health Systems Agency, and was the Chairman of the Maryland Foundation for Health Care Professional Review Organization in 1984.

• • •

The concerns of most Maryland physicians tend to be the same from year to year, perhaps shifting in relative importance or sometimes being dominated by the immediacy and magnitude of a perplexing medical tragedy such as AIDS. Dr. Kassel lists these issues as the current agenda for physicians' attention.

Quality of Care/Cost Containment

Dr. Kassel believes the foremost issue in medicine has to be the "quality of care we provide in a world that seems to make it increasingly difficult to contemplate quality because we are so concerned about serious financial issues. I honestly believe it is possible to provide quality care within financial constraints. A good physician is always conscious of how much his or her patient is being forced to spend for good care. To the good physician, quality of care is a natural confluence of circumstances that dictate what must be done to care for patients in such a way that patients can afford it.

"As a physician teaching younger physicians how to care for patients, it bothers me that not enough effort has been spent teaching young (or even older) physicians the cost of procedures that ought to be done and how to allocate resources in an economy in which costs are too high to begin with." There is a happy medium, Dr. Kassel said, "but we have not found an easy way to reach the balance of quality care and effective cost containment."

It is obvious in organizations that emphasize cost containment the patients may be placed at risk. Dr. Kassel stated, "You have to modify what you think is absolutely the best care with what patients can afford. At some point the question has to be whether patients can afford it."

Cost of care is an issue that could be expanded into who will receive artificial organs or transplants in the year 2000. Is it right that we spend millions of dollars to do something very highly technically specialized for a very few people? Dr. Kassel believes that society will have to decide for the professionals where to spend the dollars.

"The really sticky issue for the future," Dr. Kassel said, "is what we are going to do about the 95-year-old person. There are a lot of 95-year-olds, many more of them than transplant recipients. The data indicate the last six months of life costs many more dollars than the previous entire life in terms of medical costs. You are suddenly talking about billions of dollars. We do not have answers.

"Am I concerned about that? I can't afford to be concerned about it when I am an individual physician taking care of an individual patient. I must do what I think (and the patient and the family thinks) is right. Sometimes I have serious problems with myself about that."

More and more people are thinking about living wills, and there is more open discussion regarding death. Dr. Kassel's patients now sometimes walk in with a living will. "I put it with the chart, we discuss it; obviously it is part of the chart. Even so, there have been circumstances in which the children may say to me, 'Doctor, I don't care what is written there, I don't want my mother to die. You do whatever you can.' This poses an ethical problem, but it is not exactly quality of care: it is quality of caring."

Obstacles to Physician-Patient Relationships

Of perennial concern to physicians is their relationship with their patients. There are times when more than just third-party payors or more than just the federal government and mandated Medicare assignment impede physician-patient relationships. Dr. Kassel asserted that sometimes it is the doctor and sometimes it is the patient who gets in the way of a relationship. "There are skills to becoming a good doctor, such as how well you listen to the patient, how long you keep the patient waiting, and how well you interview the patient. In today's technology we sometimes get caught up in the fancy stuff and forget about the human side, which is: am I answering my patient's questions, am I trying to help the patient solve his or her problem—or am I just going to do a procedure without concerning myself too much about the personal element? The latter approach hinders a good physician-patient relationship.

"If one analyzes many malpractice cases it becomes apparent there has been a significant amount of 'malcommunication.' Since we live in a very litigious society we need to develop good communication between the physician and the patient so that anger and frustration about what happened can be translated by understanding rather than lawsuits," he said.

"Part of educating your patients is teaching them to talk to you, to ask the right questions. And that's another question: Do I see myself as a physician or a teacher? We have to do a lot of teaching: we have to teach one another in the profession, and we have to be cognizant of our own defects, because we do have them. Some doctors do not care for their patients appropriately. We need to be aware of what can be done to make those physicians better, or failing that, we must use discipline."

Dr. Kassel confessed that "one of my most difficult experiences in the last two years with the Commission on Medical Discipline is seeing bad things happen to patients: sometimes inappropriate, sometimes unavoidable, sometimes malpractice, and sometimes just one of those things that happens. It is not always easy to find out what went wrong, and if you do find out you have to do what you can to help the doctor avoid repeating that mistake."

Dr. Kassel is concerned when doctors tell him they fear than an HMO doctor cannot have the same relationship with his or her patients that a physician in private practice has. He accepts the fact that it is "possible there may be a difference in the relationship if you have circumscribed office hours with no responsibility after hours and if the patient is not paying you directly. There are reasons for assuming that may be true, just as there were reasons for me to assume that as a doctor in the military I would not be able to care for my patients in the same way as when I was in private practice. Military medicine has had the reputation that the doctors don't care about the troops. I didn't find that to be true. If it was not true for me, then it might not be true for other doctors, and a similar comment can be made about an HMO employee. A good doctor is a good doctor.

"Recently I read that one can view the practice of medicine as a profession or as a trade. If you view it as a profession, you think of it as a calling. If you view it as a trade, you are concerned about fees and dollars and how much you get for your piecework. I would like to think we are above that. I am not naive enough to think physicians should not be concerned about how much money they earn; everyone who runs a business or has business expenses should be concerned with the bottom

line. I am just as concerned about doctors who charge too much as I am about malpractice or inappropriate practice. Most good physicians don't think about the trade aspects except insofar as they have to earn a living; there is nothing wrong in earning a living."

Tort Reform

"We continue to be concerned about the malpractice insurance problem," Dr. Kassel stated. "We have made strikingly good progress in tort reform over the last two years, yet there has been no reduction in costs. The physicians of Maryland remain very upset. From a pragmatic point of view, many of us said several years ago that even if some tort reforms went through, we did not anticipate much effect on premiums right away. We still have several years, at least, to wait before the changes that have taken place in the last several years impact, depending on what happens in the insurance world," he said. "If one wants to look carefully at the next phase of tort reform, it very well may be at the insurance company level. I am not sure what else we can do."

Membership

In the complicated world of medicine today, which includes the growth of specialty societies, one can see why "organized medicine" (as represented by AMA and Med-Chi) may have membership problems. It costs a significant amount of dollars just to belong to these organizations. Dr. Kassel said, "My dues to Med-Chi, my local society, the women's auxiliary, MMPAC, and AMA are about $1,000. Membership is expensive, and for an interested physician, membership costs a lot more than money. It costs time and effort. I would like to see all Med-Chi's over 6,000 members active in the organization. One of my goals for membership is to get bright young doctors to dedicate some time for the various committees of both local and state societies."

Always the realist, he continued, "Unfortunately when you first go into practice you are so overwhelmed with the need to develop your practice, to take care of your own personal and ego needs (that is, your ability to do what you want or what you are trained to do) that organizational activities tend to get put on the back burner until you are sure you can make a go of it. When one looks at organized medicine one sees a lot of balding and portly middle-aged men. I would love to see all young physicians involved, but I can only hope this will happen by encouraging them as best we can.

"I will have done a good job if I leave this organization having encouraged a significant number of young people who were not previously active. If the future is determined by what is going on now, the question of goals for the year really revolves around developing interested, capable, bright young people to become involved in the medical society," said Dr. Kassel. "I hope to identify and involve younger physicians as resources for the future by moving them into more important positions."

Med-Chi needs to learn how to live with the diversity a 6,000-member group implies. Many times it will be difficult to speak in a unified voice, but one can learn to adjust and understand other perceptions in order to work together for the benefit of our patients and of the medical society.

Each year the President reviews Med-Chi committee membership, and Dr. Kassel is taking particular care with this task. "In my selection or reappointment of committee members I looked at current members who had fulfilled their obligations and replaced them with people who had indicated they wanted to be active." Dr. Kassel looked for young members who had been in practice less than five years, "because the life blood of the organization is not in the 60-year-old retiring physicians: it is in the young doctors who are going to be around for 20 or 30 years. Unless the younger ones become involved, the membership will not be representative."

Whenever Dr. Kassel talks with a young physician, he indicates that each individual has to set up whatever priorities are best for that person. He would like to see Med-Chi and the local societies "as a reasonably high level of priority. We have to indicate by what we do that the priority is worth it: we have to make the physician community aware of all the various benefits we offer, whether it be quite as obvious as tort reform or something as indirect as getting curriculum changes for AIDS education."

Goals as President

People always come to a point in their lives when they wonder whether they have done all the things they would like to have done.

Peer Review Dr. Kassel has found that the medical profession, in general, has not been as self-critical as it should be. He would like to continue to be involved with that process. "We need to do better peer review because it is the right thing to do. A profession that doesn't look at itself and demand of its participants the very highest quality performance is not a profession.

"For many years we were apologists for one another.

The attitude seemed to be 'There but for the grace of God go I, so I had better step lightly.' That's no longer appropriate. Critics of the peer review system said, 'You can't trust people who are doing bad things to critically evaluate other people who are doing bad things.' The bottom line is that the more carefully we scrutinize one another, the better care we can give our patients. And good care is what I really want to be remembered for," Dr. Kassel admitted.

Med-Chi IPO During the past year or so some issues have been raised concerning the role of the medical society in certain activities. For example, there are serious implications for Med-Chi as a nonprofit organization if it should decide to develop a spin-off management corporation, an independent practice organization (IPO), or other business ventures. While it could be of benefit to the physician community as well as profitable for Med-Chi to run, such a proposal needs to be examined carefully.

"During six months of my tour as president-elect, I chaired a task force that met and reported to Council that the IPO issue was very complex and disturbing in a number of areas. We have gone back to the drawing board; we may not come up with an answer," Dr. Kassel conceded. Some state medical societies have investigated this matter very carefully and decided against it; others have decided it is worthwhile. The deliberative process certainly will continue through Dr. Kassel's tenure as president.

Small Area Practice Variations An issue has surfaced in the academic world through a series of published articles: studies of variations in practice patterns in small areas. Dr. Kassel asserted that there are "obvious implications to delivery of care when data begin to suggest some small areas in the state do or do not do certain procedures at the same level of activities. It is inappropriate to say which is right or wrong, because we do not really know.

"This year Med-Chi is studying some of these specific issues as they relate to the practice of medicine in Maryland," he continued. "We are working with the Maryland Hospital Association and with the Department of Health and Mental Hygiene in an attempt to find some reasonable understanding of why variations of practice patterns occur within small or large areas. To my knowledge no other medical society has attempted to look at it on a statewide basis as we have. I'm very enthusiastic about the prospect of some interesting information that I hope will answer some questions."

Professional and Personal From a professional point of view Dr. Kassel is happy with what he is doing.



"Mostly my future consists of perhaps doing better what I now do: taking good care of my patients and helping teach young physicians how to do the same thing. I hope to continue actively; I do not intend to be an emeritus person if I can help it." A man who wants the best of all worlds, "Lee" Kassel has no intention of slowing down "even though I have reached that advanced stage where people stand up respectfully when I enter the room. I have a young son, whom I am very close to, whose future I hope to be around to share. That's a very important goal for me." That son, Danny (who just turned eleven), is an excellent tennis player, and Dr. Kassel spends many weekends on the road taking him to various matches and tournaments in and around Maryland. A real "tennis daddy," he enjoys these trips and watching his son play whether in lessons or in competition.

Dr. Kassel's three older children are spread across the country. A daughter, Laurie, lives in New Jersey; his oldest son, Jeff is in Wisconsin; and a younger son, David, is in Southern California.

Dr. Kassel is an across-the-board sports fan, perhaps more interested in football than in other games. When his schedule allows time, he is an enthusiastic golfer but "not as competitive as I would like to be."

Two other characteristics mark this well-rounded man: he is a voracious reader of almost anything, and he has an insatiable curiosity about everything.

As far as medicine in Maryland is concerned, Dr. Kassel would like to be remembered for giving the best possible care to patients. He believes "Medicine is an honorable profession, and I am delighted to be part of it. I hold my principles very high in terms of what I expect from myself and from my colleagues. There is nothing wrong with that."

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Medical Miscellany



Albert M. Antlitz MD (left), Chairman, Board of Directors, Center for Health Education, Inc. presenting to David M. Levine MD, ScD, Director and Professor of Internal Medicine, Johns Hopkins University, School of Medicine, an award for his outstanding contribution to research activities in disease prevention and health promotion.



Robert J. Spence MD (right) receiving an award as coauthor (with Ernesto J. Ruas MD) for the best scientific article from a practitioner printed in the *Maryland Medical Journal* in 1986. Presented by Donald T. Lewers MD, the award was for "The Banking and Clinical Use of Human Skin Allograft for Trauma Patients," which appeared in the March 1986 issue.



Mrs Erma Hirschfeld (right), an Auxilian, receiving First Place Award for the color category in Med-Chi's Annual Photo Contest from Donald T. Lewers MD.



In 1986 for the third consecutive year Med-Chi exceeded its prior year's AMA membership. Then-President Donald T. Lewers MD (right) accepted the award from William S. Hotchkiss MD during the Leadership Conference in Chicago last February.

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Sue Stephens, VP Lending discusses plans with Dr. Edward Perl. Reisterstown Federal provided financing for the Eldersburg Medical Center.

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BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR.)*

INDERAL® LA brand of propranolol hydrochloride **(Long Acting Capsules)**

DESCRIPTION. INDERAL LA is formulated to provide a sustained release of propranolol hydrochloride. INDERAL LA is available as 60 mg, 80 mg, 120 mg, and 160 mg capsules.

CLINICAL PHARMACOLOGY. INDERAL is a nonselective, beta-adrenergic receptor-blocking agent possessing no other autonomic nervous system activity. It specifically competes with beta-adrenergic receptor-stimulating agents for available receptor sites. When access to beta-receptor sites is blocked by INDERAL, the chronotropic, inotropic, and vasodilator responses to beta-adrenergic stimulation are decreased proportionately.

INDERAL LA Capsules (60, 80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with INDERAL LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of INDERAL Tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially.

INDERAL LA should not be considered a simple mg-for-mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to INDERAL LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, INDERAL LA has been therapeutically equivalent to the same mg dose of conventional INDERAL as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure and rate pressure product. INDERAL LA can provide effective beta blockade for a 24-hour period.

INDICATIONS AND USAGE. Hypertension: INDERAL LA is indicated in the management of hypertension; it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. INDERAL LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: INDERAL LA is indicated for the long-term management of patients with angina pectoris.

Migraine: INDERAL LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

CONTRAINDICATIONS. INDERAL is contraindicated in 1) cardiogenic shock, 2) sinus bradycardia and greater than first-degree block, 3) bronchial asthma, 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.

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WARNINGS. CARDIAC FAILURE: Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or INDERAL should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following *abrupt* discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned, the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (eg, chronic bronchitis, emphysema) — PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY: The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, eg, dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA: Beta blockers should be used with caution in diabetic patients if a beta-blocking agent is required. Beta blockers may mask tachycardia occurring with hypoglycemia, but other manifestations such as dizziness and sweating may not be significantly affected. Following insulin-induced hypoglycemia, propranolol may cause a delay in the recovery of blood glucose to normal levels.

THYROTOXICOSIS: Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol may change thyroid function tests, increasing T_4 and reverse T_3, and decreasing T_3.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case, this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS. GENERAL: Propranolol should be used with caution in patients with impaired hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta-adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be told that INDERAL may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

CLINICAL LABORATORY TESTS: Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS: Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if INDERAL is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

Caution should be exercised when patients receiving a beta blocker are administered a calcium-channel-blocking drug, especially intravenous verapamil, for both agents may depress myocardial contractility or atrioventricular conduction. On rare occasions, the concomitant intravenous use of a beta blocker and verapamil has resulted in serious adverse reactions, especially in patients with severe cardiomyopathy, congestive heart failure or recent myocardial infarction.

Aluminum hydroxide gel greatly reduces intestinal absorption of propranolol.

Ethanol slows the rate of absorption of propranolol.

Phenytoin, phenobarbitone, and *rifampin* accelerate propranolol clearance.

Chlorpromazine, when used concomitantly with propranolol, results in increased plasma levels of both drugs.

Antipyrine and *lidocaine* have reduced clearance when used concomitantly with propranolol.

Thyroxine may result in a lower than expected T_3 concentration when used concomitantly with propranolol.

Cimetidine decreases the hepatic metabolism of propranolol, delaying elimination and increasing blood levels.

Theophylline clearance is reduced when used concomitantly with propranolol.

CARCINOGENESIS, MUTAGENESIS, IMPAIRMENT OF FERTILITY: Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

PREGNANCY: Pregnancy Category C. INDERAL has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. INDERAL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

NURSING MOTHERS: INDERAL is excreted in human milk. Caution should be exercised when INDERAL (propranolol HCl) is administered to a nursing woman.

PEDIATRIC USE: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular: Bradycardia; congestive heart failure; intensification of AV block; hypotension; paresthesia of hands; thrombocytopenic purpura; arterial insufficiency, usually of the Raynaud type.

Central Nervous System: Light-headedness; mental depression manifested by insomnia, lassitude, weakness, fatigue; reversible mental depression progressing to catatonia; visual disturbances; hallucinations; vivid dreams; an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics. For immediate formulations, fatigue, lethargy, and vivid dreams appear dose related.

Gastrointestinal: Nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: Pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: Bronchospasm.

Hematologic: Agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-Immune: In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous: Alopecia, LE-like reactions, psoriasiform rashes, dry eyes, male impotence, and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.

DOSAGE AND ADMINISTRATION. INDERAL LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily. If patients are switched from INDERAL Tablets to INDERAL LA Capsules, care should be taken to assure that the desired therapeutic effect is maintained. INDERAL LA should not be considered a simple mg-for-mg substitute for INDERAL. INDERAL LA has different kinetics and produces lower blood levels. Retitration may be necessary, especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION — *Dosage must be individualized.* The usual initial dosage is 80 mg INDERAL LA once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg once daily or higher until adequate blood-pressure control is achieved. The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

ANGINA PECTORIS — *Dosage must be individualized.* Starting with 80 mg INDERAL LA once daily, dosage should be gradually increased at three- to seven-day intervals until optimal response is obtained. Although individual patients may respond at any dosage level, the average optimal dosage appears to be 160 mg once daily. In angina pectoris, the value and safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS).

MIGRAINE — *Dosage must be individualized.* The initial oral dose is 80 mg INDERAL LA once daily. The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimal migraine prophylaxis. If a satisfactory response is not obtained within four to six weeks after reaching the maximal dose, INDERAL LA therapy should be discontinued. It may be advisable to withdraw the drug gradually over a period of several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS — 80-160 mg INDERAL LA once daily.

PEDIATRIC DOSAGE — At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

*The appearance of these capsules is a registered trademark of Ayerst Laboratories.

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Secretary 691
Scientific Activity 691
Tel-Med 693
Treasurer 695

Future Issues of the *Maryland Medical Journal*

September
- **Heart Transplantation: The Johns Hopkins Hospital Experience**—William A. Baumgartner MD *et al.*
- **HIV Infection in Baltimore: Antibody Seroprevalence Rates among Parenteral Drug Abusers and Prostitutes**—W. Robert Lange MD *et al.*
- **Acute Pancreatitis Caused by Biliary Ascariasis**—Howard J. Goldberg MD and David B. Doman MD

November
- **Adolescent Pregnancy**

The Center for Health Education cooperating with the National March of Dimes Birth Defects Foundation will present a collection of articles dealing with aspects of youthful pregnancy including risk factors, medical management, complications, STDs, psychological and social problems during pregnancy, pregnancy prevention, and community resources.

Medical and Chirurgical Faculty of the State of Maryland

189th Annual Session—Omni International Hotel, Baltimore

First Meeting, April 29, 1987 (320th Meeting) Minutes, House of Delegates

The 320th meeting, first of the 189th Annual Session of the House of Delegates of the Medical and Chirurgical Faculty of the State of Maryland was called to order at 10:20 a.m., the President, Donald T. Lewers MD, and Secretary, Raymond M. Atkins MD, being present.

The following delegates (or alternates) were registered as being in attendance; an asterisk indicates an alternate delegate; (C) denotes Council Member:

Allegany County
Augusto Figueroa

Anne Arundel County
Henry H. Canton
Benjamin De Guzman
Hilary T. O'Herlihy
Jorge B. Ramirez

Baltimore City
Aristides C. Alevizatos
Donald M. Barrick
James E. Bell
Richard Berkowitz
Stephen M. Busky
*Joel M. Cherry
Gaylord L. Clark, Jr.
*Howard A. Davidov
Marion Friedman
Robert B. Goldstein
Susan R. Guarnieri
Michael G. Hayes
John H. Hirschfeld
*Gerald A. Hofkin
Joseph H. Hooper
Thomas E. Hunt
*Murray A. Kalish
Jeanne S. Kraus
John B. MacGibbon
Raymundo A. Magno
Donald W. Mintzer
*Richard S. Munford
Albert Nahum
Samuel I. O'Mansky
William F. Renner
Benjamin Rothfeld
Daniel C. Sapir
*Gerhard Schmeisser, Jr.
*Bernard R. Shochet
*David M. Solomon
Edward L. Suarez-Murias
*Alan J. Sweatman
George Taler
Thomas E. Van Metre, Jr.
Joseph W. Zebley, III

Baltimore County
Thomas E. Allen
Marianne Benkert
Harold B. Bob
Louis C. Breschi
Esther Edery
A. H. Ghiladi
Deusdedit Jolbitado
Paul G. Koukoulas
John M. Krager
Herbert J. Levickas
Mayer C. Leibman
*Edward Nachlas
Louis J. Pratt, Jr.
Allan G. Scott
Margaret L. Sherrard
John F. Strahan
*J. Carlton Wich

Calvert County
Joseph Fastow (C)
David W. Fricke

Charles County
Guillermo E. Sanchez

Dorchester County
Paul A. Stagg

Garrett County
Herbert H. Leighton (C)

Harford County
Rose M. Bonsack
Philip W. Heuman
Ben E. Oteyza

Howard County
Frederick Bergmann
Thomas F. Herbert

Kent County
Harry P. Ross

Montgomery County
Carol L. Bender
Charles H. Ligon
Ralph E. Longway
Herman C. Maganzini
Francis C. Mayle, Jr.
Edward S. Mehlman
Jorge H. Reisin
Margaret T. Snow
Thomas M. Wilson

Prince George's County
John E. Jeffrey
Zorayda M. Lee-Llacer
Ricardo Longoria
George S. Malouf, Jr.
*Imad S. Mufarrij
David N. Robb
*Elie A. Sayan
Frederick Wilhelm

Queen Anne's County
John R. Smith, Jr. (C)

St. Mary's County
J. Roy Guyther (C)

Talbot County
Gregg Rhodes
Alfred A. Leszczynski

Washington County
Edward W. Ditto III
Albert J. Strauss, Jr. (C)

Wicomico County
Hilda I. Houlihan

Worcester County
Federico Arthes (C)

Board of Medical Examiners
Arthur T. Keefe, Jr.

Council
Albert M. Antlitz
Raymond M. Atkins
Mack Bonner
Ira N. Brecher
Aurelio De La Paz
Benjamin Del Carmen
John M. Dennis
Michael R. Dobridge
J. D. Drinkard
Vincent D. Fitzpatrick
Frederick J. Hatem
John H. Hebb
Leon E. Kassel
Reynaldo L. Lee-Llacer
Leon R. Levitsky

Donald T. Lewers
George S. Malouf
J. David Nagel
Hiroshi Nakazawa
Charles F. O'Donnell
Donald J. Roop
Gary L. Rosenberg
Marvin Schneider
Aubrey C. Smoot
Roland T. Smoot
Joseph Snyder
John B. Umhau
Baltasar B. Velez
Israel H. Weiner
Donald W. Wiczer
Kennard L. Yaffe
Jose M. Yosuico

Past Presidents
John R. Davis, Jr.
Arthur G. Siwinski

Also present were members of the Faculty staff.

Invocation

Leslie R. Miles, Jr., MD, Chairman of the Committee on Medicine and Religion, delivered the invocation.

Remarks

Mike Miller, President of the Maryland Senate and Alan Rifkin, Administrative Aide to Governor Schaefer, addressed the House and expressed appreciation to Angelo Troisi and Gerry Evans for their effective legislative activities in working with the General Assembly and the Governor in getting important legislative packages passed during the 1987 legislative session. Mr. Troisi and Mr. Evans each were presented with a beautiful painting and received a citation from the Governor in recognition of their accomplishments.

Alan R. Nelson MD

The President introduced Alan R. Nelson MD, Chairman of the AMA Board of Trustees, who delivered his remarks to the House.

Announcements

The President made certain announcements, advising of various rules for conduct of House business, as well as information on various scientific and social functions scheduled for the session.

AMA-ERF Checks Presented

Checks in the amounts of $25,454 in unrestricted funds, and $16,090 in restricted funds for medical student assistance were presented to John M. Dennis MD, Dean of the University of Maryland School of Medicine; $17,014 in unrestricted funds and $4,191 in restricted funds for medical student assistance were presented to Robert E. Reynolds MD, Associate Dean for Administration, the Johns Hopkins University School of Medicine; and $7,389 in unrestricted funds and $563 in restricted funds for medical student assistance were presented to Bruce C. Redington PhD, Associate for Administration, Henry M. Johnson Foundation, Uniformed Services, University of the Health Sciences. Mrs. Elizabeth Linhart, Chairman of the AMA-ERF in Maryland and Mrs. Nancy Howell, President of the Auxiliary, participated in the presentation of the checks.

A.H. Robins Award

The President presented the A. H. Robins Award for Community Service to George S. Malouf, Sr., MD, who addressed the House with an expression of appreciation. Dr. Malouf was given a standing ovation by the House.

Certificates of Appreciation

The President presented Certificates of Appreciation to the following committee chairmen:

Louis C. Breschi MD, Chairman, Committee on Professional Ethics
Israel H. Weiner MD, Chairman, Legislative Committee
James E. Bell MD, Chairman, Public Relations Committee

Media Awards

The President then presented awards for the Second Annual Awards Program, which included a plaque and a $1,000 cash donation to the medical charity of the recipient's choice to the following:

TV WMAR-TV, Channel 2 News Team for "Channel 2 News Telecast: Crack." Cash award goes to "Just Say No" Clubs of Maryland (Ken Matz accepted the award).
Magazine Randi Henderson, *Sun Magazine* for her article "The Comeback Kid" (The Kennedy Institute for Handicapped Children to receive her cash award).
Daily Newspaper Mark Bomster, *Evening Sun*, for his two-day series, "Drug Testing and You." Mr. Bomster selected the Pediatric AIDS Care and Evaluation Clinic at the University of Maryland to receive his cash donation.
Weekly, Biweekly, Semi-weekly Newspaper Deidre Nerreau of the *Gaithersburg Gazette* for her article, "Taking A Dive, Hyperbaric Treatment Saves Limbs." Ms. Nerreau donated her $1,000 prize to Sonar Sensory Substitution Spatial Behavior Program at Boston College.

The President then presented the Citations of Merit in the Media Awards Program to:

Television Marilyn Ann Mitzel of WJLA-TV for her news segment, "Second Opinion," and Jack

Bowden of WMAR-TV for his news segment, "Barnacle Doctor."

Magazine Ramsey Flynn of *Baltimore Magazine* for his article, "Hospital, Heal Thyself."

Daily Newspaper Sandy Rovner of *The Washington Post* for the article, "Down But Not Out." Maureen Curran of *The Montgomery Journal* for the article, "Doctors Charge Medicare Rules Shortchange Elderly." Mike Adams of *The Evening Sun* for his article, "Sylvester's Story." Frank Roylance and Sue Miller of *The Evening Sun* for their article, "The Trials of Malpractice."

Weekly, Biweekly or Semiweekly Newspaper Lynne Salisbury of *The Columbia Flier* for her article, "Adult Children Overcoming Alcoholism."
Dana Grabiner of *The Chronicle* for her article, "Taste And Smell Disorders Can Be Warning Signs of More Serious Problems."

Photo Contest

The President announced the winners of the Photo Contest:

Color 1st Place—Mrs. Irma Hirschfeld; 2nd Place—Andrew Munster, MD
Black and White 1st Place—Lawrence Rubin MD

Maryland Medical Journal Awards

The President presented awards to the following winners of the first annual *Maryland Medical Journal:*

Robert J. Spence MD, for his joint effort with Ernesto J. Ruas MD for their article, "The Banking and Clinical Use of Human Skin Allograft in Trauma Patients."

Honorable Mention: Ali Daneshvar MD, for his article, "Autologous Transfusion: The Treatment of Choice," and Glenn W. Gellhoed MD, for his article, "Tumors and Humors: Current Status of the Immunology of Cancer."

CHE Award

The President then called on Albert M. Antlitz MD, Chairman of the Board of the Center for Health Education, for presentation of the Center's annual award to:

David M. Levine MD, Johns Hopkins University, School of Medicine, for his outstanding contribution in disease prevention and health promotion applied research.

Semiannual Minutes

The minutes of the Semiannual Session of the House of Delegates held on Saturday, September 27, 1986 in Baltimore, Maryland, having been distributed to all members, were approved by the House after being amended, as follows:

On page 11, under "President's Remarks," add . . . "There were comments of concern about Medical Mutual offering advice, assistance, and possibly contracting with attorneys to establish an insurance company to provide them with malpractice insurance. Following discussion, it was recommended that better communications should be established to keep Maryland physicians informed of Med-Mutual's activities, after which the following motion was adopted:

That information on the activities of Medical Mutual Liability Insurance Society of Maryland be published at least once every three months in the *Maryland Medical Journal.*"

Guests

The President introduced the following guests to the House of Delegates who made brief remarks:

Richard L. Fields MD, President, The Medical Society of Virginia
Charles E. Turner MD, President, West Virginia State Medical Association
Carlos Silva MD, President, Medical Society of the District of Columbia
Mrs. Pat Durham, President, AMA Auxiliary

Necrology

The members of the House of Delegates rose in respect for deceased colleagues as the Secretary read the following necrology:

Anne Arundel County	
Richard F. Moschell MD	November 28, 1986
Hunter P. Stephens MD	August 10, 1986
Baltimore City	
John Costantini MD	January 17, 1987
Howard H. Gendason MD	April 29, 1986
R. Walter Graham MD	February 10, 1987
I. Bradshaw Higgins MD	July 6, 1986
Irene Hitchman MD	September 28, 1986
Walter L. Kilby MD	June 15, 1986
Ruperto M. Manankil MD	June 18, 1986
Carlos G. Miller MD	September 7, 1986
Richard T. Shackelford MD	January 24, 1987
Helen B. Taussig MD	May 20, 1986
Cesar L. Tonder MD	February 8, 1987
Lois A. Young MD	August 14, 1986
Baltimore County	
Silvia A. Alessi MD	April 19, 1987
William C. Battle MD	January 26, 1987
Oscar L. Cabrisses MD	July 18, 1986
Harry J. Connolly MD	September 24, 1986
Elliott C. Flick MD	November 26, 1986

Richard E. Hoover MD	July 7, 1986
Ivan D. Junk MD	January 4, 1986
Kurt Nussman MD	July 28, 1986
Charles H. Reier MD	January 1, 1986
Joseph B. Sindelar MD	May 4, 1986
Carroll County	
Gertrude M. Gross MD	August 8, 1986
Cecil County	
Walter Urusky MD	December 22, 1986
Dorchester County	
Albert E. Bunker MD	March 24, 1986
Harford County	
Alfred W. Grigoleit MD	December 19, 1986
Montgomery County	
John M. Bankhead MD	July 18, 1986
Frances E. Brennecke MD	July 16, 1986
Read Calvert MD	November 13, 1986
Katharine A. Chapman, MD	July 11, 1986
John L. Lertora MD	May 24, 1985
John J. Sweeney MD	April 14, 1986
Hsiang L. Tseng MD	November 25, 1986
Prince George's County	
John S. Haught MD	December 5, 1986
Somerset County	
Sarah M. Peyton MD	November 5, 1986
Talbot County	
George A. Hahn MD	May 2, 1986
Washington County	
A. Maynard Bacon MD	May 12, 1986
Jack W. Beachley MD	November 18, 1986
Wicomico County	
Seth H. Hurdle MD	June 27, 1986
Worcester County	
Hunter R. Mann MD	February 2, 1987
Student Society	
Jeffrey H. Hellman	July 28, 1986
Affiliate	
Augustin Del Campo MD	May 10, 1986

Memorial Resolution

On motion of the Secretary, the following resolution, after amended, was adopted unanimously by the House:

John G. Ball MD
1908–1987

Whereas, John G. Ball MD, born in Pennsylvania, a graduate of Oberlin College in 1931, received his Doctorate of Medicine from Buffalo University Medical School in 1936, and committed himself to the private practice of General Medicine in Bethesda from 1937 until his retirement in 1982;

Whereas, He served his country with honor as a medical officer in the United States Army from 1942 to 1946;

Whereas, During his long and active career, Dr. Ball served as President of the Montgomery County Medical Society and President of the Maryland Academy of Family Physicians; as Vice-President of the Medical and Chirurgical Faculty in 1963, as a member of the Council and House of Delegates, and numerous committees, and as a member of the Commission on Medical Discipline;

Whereas, In 1941 he founded Suburban Hospital in Bethesda and served as a charter member of the Board of Trustees, as Chief of the Medical Staff, and was named an Honorary Trustee of the hospital;

Whereas, He served as Assistant Deputy Medical Examiner of Montgomery County and as Assistant Deputy Medical Examiner of Frederick County;

Whereas, He was a member of distinction in his church as a founder of Christ Lutheran Church, and numerous civic and professional societies with which he was affiliated; and

Whereas, His absence by his untimely death will be a grievous loss to his family, the medical profession and the public; therefore, be it

Resolved, That the House of Delegates of the Medical and Chirurgical Faculty of the State of Maryland on April 29, 1987 adopts this resolution with an expression of deep sorrow on the death of Dr. Ball, a member from Montgomery County; and

Resolved, That this resolution be spread upon the minutes of this meeting and a copy be sent to his wife, Mrs. Monica Ball, and to his children in gratitude for the eminence of his life.

Fifty-Year Members

Presentation of Fifty-Year certificates and pins by the President to the following members took place with the awards being mailed to those unable to attend:

Allegany County
Richard J. Williams MD

Baltimore City
George J. Farber MD
Warfield M. Firor MD

Philip D. Flynn MD
Samuel J. Hankin MD
Robert F. Healy MD
Robert C. Kimberly MD
Manuel Levin MD
W. Kenneth Mansfield MD
Louis R. Maser MD
Sigmund R. Nowak MD
M. E. Randolph MD
R. C. Tilghman MD
Daniel Wilfson MD

Baltimore County
Arthur W. Kac MD
William M. Seabold MD

Charles County
Frank A. Susan MD

Frederick County
Howard W. Ash MD

Montgomery County
Leo I. Donovan MD

Washington County
Sidney Novenstein MD

Affiliate
Edmund L. Keeney MD

Emeritus Membership

Upon motion of Michael R. Dobridge MD, Chairman of the Council, the following members were elected to Emeritus Membership in the Faculty, each having received the recommendation of their component societies and the Council:

Allegany County
G. Overton Himmelwright MD, Cumberland

Anne Arundel County
Edward S. Beck MD, Annapolis
Philip Briscoe MD, Annapolis
Robert Dabolins MD, Glen Burnie
Gustav Delgado MD, Annapolis
Hubert F. Manuzak MD, Glen Burnie
Pamela R. Moore MD, Annapolis
Thomas E. Reichelderfer MD, Annapolis
Robert A. Riley MD, Annapolis

Baltimore City
Edmund G. Beacham MD, Baltimore
Francis F. C. Chang MD, Baltimore
Thomas E. Fox MD, Baltimore
Norman R. Freeman MD, Baltimore
W. Alfred Gakenheimer MD, Baltimore
John R. Hankins MD, Baltimore
Henry J. Houska MD, Baltimore
Allen Kleiman MD, Baltimore
Edward S. Klohr MD, Baltimore
Benjamin B. Lee MD, Ellicott City
William W. Magruder MD, Baltimore
John E. Miller MD, Baltimore
Louis E. Queral MD, Baltimore
Aubrey D. Richardson MD, Baltimore
Kurt Seiffert MD, Baltimore

Baltimore County
William D. Gentry, Jr., MD, Baltimore
Vernon C. Kelly MD, Baltimore
John J. Krejci MD, Lutherville
John M. Rehberger MD, Baltimore
George J. Richards, Jr., MD, Baltimore

Carroll County
Sherman Chang MD, Westminster
Rita M. Glahn MD, Woodbine
Howard E. Hall MD, Sykesville

Dorchester County
J. Edwin Fassett MD, Cambridge

Montgomery County
A. Dement Bonifant MD, Olney
Robert R. Cross MD, Rockville
Joseph A. Dugan MD, Rockville
John E. Everett MD, Kensington
John G. Fawcett MD, Boyds
Dorothy Gill MD, Bethesda
Joel B. Hoberman MD, Bethesda
Harry J. Kicherer MD, Pinehurst, NC
Maurice J. Leon MD, Bethesda
Thomas F. O'Connor MD, Bethesda
Joseph M. O'Neil MD, Rockville
Raymond A. Osbourn MD, Rockville (Affiliate)
James T. Quattlebaum MD, Gibson Is.
Gordon S. Rosenberger MD, Rockville
James S. Stanton MD, Rockville
Ejnar Vinten-Johansen MD, Rockville
Arthur F. Woodward MD, Rockville

Prince George's County
Paul Chen MD, Accokeek
John Cosma MD, Bowie
Blanca A. Gimenez MD, Adelphi
Charles M. Weber MD, Riverdale
Man J. Yoon MD, Potomac

Somerset County
C. G. Rawley MD, Crisfield

Talbot County
Edgar Bering MD, Easton
Eugene H. Guthrie MD, Easton
John I. Knud-Hansen MD, Easton
Gibson A. Packard MD, Easton
E.C.H. Schmidt MD, Easton

Washington County
Richard T. Binford MD, Hagerstown
Frederick D. Dove Jr., MD, Hagerstown

Wicomico County
Andrew C. Mitchell MD, Fruitland
A. Herbert Sembly MD, Salisbury

Report on IPA Task Force

Leon E. Kassel MD, outgoing Chairman of the IPA Task Force, updated the House members on recent developments of the task force. He explained that the task force members had been working under time constraints due to the Champus program deadlines, but more time is now available for the task force's further study since the Champus program deadlines have been moved back considerably. Dr. Kassel also mentioned that consideration will be given to incorporation of the existing functions of the Maryland Foundation for Health Care into any new organization.

AIDS Education Statement Adopted

Dr. Dobridge, on behalf of the Council, presented the following statement on AIDS education, which was adopted unanimously by the House:

> "The Physicians of Maryland strongly encourage all school boards of Maryland to incorporate AIDS education into their curriculum beginning at 3rd grade level in concurrence with the Surgeon General's report on AIDS. We believe it is in the interest of the health of citizens of this State and we stand ready to assist in the development of such curricula."

Information Item

Dr. Dobridge informed the House of the motion passed by the Council at its meeting today (April 29) authorizing the formation of an ad hoc committee, to be appointed by the Council Chairman, to study the restructuring of the Faculty organization.

Treasurer's Report

Jose M. Yosuico MD, Treasurer, made a brief report on the 1987 budget as adopted by the Council, which was distributed to all members prior to the meeting.

Bylaws Committee

Reynaldo L. Lee-Llacer MD, Chairman of the Bylaws Committee, reported for information only the issues considered by the Bylaws Committee at its meeting on March 10, 1987. He indicated that after further study, these issues would be presented to the House at its Semiannual meeting on September 26, 1987 for consideration.

Nominating Committee Report

J. D. Drinkard MD, Immediate Past-President, on behalf of the Nominating Committee, presented the following slate of officers to the House of Delegates:

President-elect
- Michael R. Dobridge, Silver Spring, Montgomery County (President-elect 1987–88) (President, 1988–89)

First Vice-President
- Marvin Schneider, Wheaton, Montgomery County (1988)

Second Vice-President
- Hilary T. O'Herlihy, Glen Burnie, Anne Arundel County (1988)

Third Vice-President
- J. Richard Lilly, Hyattsville, Prince Georges County (1988)

Secretary
- Raymond M. Atkins, Baltimore, Baltimore City (1988)

Treasurer
- Jose M. Yosuico, Laurel, Baltimore City (1988)

Committee on Scientific Activity (6-year term—1988–1994) Victor R. Hrehorovich, Baltimore, Baltimore City

Finney Fund Committee (5-year term—1988–1993) Vacancy

Delegates to the AMA
- Donald T. Lewers, Easton, Talbot County (January 1, 1988—December 31, 1990)
- George S. Malouf, Hyattsville, Prince Georges County (January 1, 1988—December 31, 1990)

Alternate Delegates to the AMA
- John H. Hebb, Baltimore, Baltimore County (January 1, 1988–December 31, 1990)
- Henry N. Wagner, Jr., Baltimore, Baltimore City (January 1, 1988–December 31, 1990)
- Vacancy (Student) (January 1, 1987–December 31, 1989)

Board of Medical Examiners (4 year term)
- Chris Papadopoulos, Baltimore, Baltimore City (June 30, 1987–June 30, 1991)
- Thomas M. Wilson, Bethesda, Montgomery County (June 30, 1987–June 30, 1991)

Additional Nominations

The floor was opened for further nominations. William E. Venanzi and Stephanie Linder (students) both of Baltimore, were nominated for AMA Alternate Delegate. Nominations were declared closed by general consent.

Tellers Appointed

The President then appointed the following physicians to act as tellers for the Friday elections: Gary

Rosenberg MD, Ira Brecher MD, and Leslie R. Miles, Jr., MD.

Committee on Scientific Activity

J. Courtland Robinson MD, Chairman of the Committee on Scientific Activity, reported on the various annual meeting activities taking place and urged the members to attend as many as possible.

The President announced the election of the Board of Medical Examiners to take place immediately following adjournment of the House of Delegates at the General Meeting and urged all members to remain for the meeting. He also announced that election of the balance of the slate would take place as the first item of business at the session scheduled for Friday, May 1, at 2 p.m.

The meeting was adjourned at 12:32 p.m. by unanimous consent.

RAYMOND M. ATKINS **MD**
Secretary



George S. Malouf MD (left) received from **Donald T. Lewers** MD the 1987 A.H. Robins Award for Community Service at the 189th Annual Meeting of the Faculty in recognition of his outstanding service to the community at large.

Dr. Malouf was the first foreign medical graduate to serve as president of Med-Chi (1984) and as president of the Prince George's Medical Society in 1975. He is a specialist in ophthalmology and is Chief of the Division of Ophthalmology at Prince George's General Hospital and Medical Center. In addition, Dr. Malouf is the founding member of the Health and Planning Committee of Prince George's County and Trustee of the Prince George's Medical Charitable Foundation.

Born in Zahle, Lebanon, Dr. Malouf moved to the US after receiving his Doctorate from the French Faculty of Medicine in Beirut. Known to his colleagues as a peacemaker, he has played an active role in community service for over 30 years. More specifically, he has devoted thousands of hours to help his native countrymen find a haven in America.

As a young physician, he served in the US Army Medical Corps in Boulder, Colorado, and was awarded the Army's Certificate of Achievement for devoted service to that community.

In 1971, the Melhito Catholic Church of Washington, DC declared Dr. Malouf man of the year for his personal and almost single-handed efforts resulting in the establishment of this Eastern Christian Church.

In Maryland, he was responsible for the development of the Baden Health Service, a volunteer community service established to provide health care to over 15,000 residents in and around Baden, who until recently had no source of medical care.

Throughout the years Dr. Malouf has distinguished himself as a devoted humanitarian. His accomplishments within the community and his compassion for all people remain an unparalleled example to us all.

Second Meeting, May 1, 1987 (321st Meeting)
Minutes: House of Delegates

The 321st meeting, second of the 189th Annual Session of the House of Delegates of the Medical and Chirurgical Faculty of the State of Maryland was called to order at 2:05 p.m., the President, Donald T. Lewers MD, and the Secretary, Raymond M. Atkins MD, being present.

The following delegates (or alternates) were registered as being in attendance; an asterisk indicates an alternate delegate; (C) denotes Council Member:

Allegany County
Wally S. Hijab

Anne Arundel County
*Samuel M. Libber
*David S. O'Brien
Hilary T. O'Herlihy

Baltimore City
Aristides C. Alevizatos
*Ian R. Anderson
James E. Bell
Richard Berkowitz
Joseph I. Berman
Mack Bonner, Jr. (C)
Stephen M. Busky
Gaylord L. Clark, Jr.
Marion Friedman
Susan R. Guarnieri
Michael G. Hayes
John H. Hirschfeld
Joseph H. Hooper
Thomas E. Hunt
*Allan D. Jensen
*Murray A. Kalish
John B. MacGibbon
Raymundo S. Magno
Donald W. Mintzer
Richard S. Munford
Albert Nahum
*Gary W. Nyman
Samuel I. O'Mansky
William F. Renner
Benjamin Rothfeld
Gardner W. Smith
Edward L. Suarez-Murias
*Alan J. Sweatman
Thomas E. Van Metre, Jr.
Joseph W. Zebley, III

Baltimore County
Thomas E. Allen
Harold B. Bob
Louis C. Breschi
Esther Edery
A. H. Ghiladi
Paul G. Koukoulas
John M. Krager
Herbert J. Levickas
Louis J. Pratt, Jr.
Allan G. Scott
Margaret L. Sherrard

Calvert County
Joseph Fastow (C)
David W. Fricke

Cecil County
Henry J. Farkas
Andrew P. Fridberg (C)

Dorchester County
Lewis Brudette
Paul A. Stagg

Garrett County
Herbert H. Leighton (C)

Harford County
Philip W. Heuman
Ben E. Oteyza

Howard County
Thomas F. Herbert

Kent County
Harry P. Ross

Montgomery County
Carol L. Bender
Charles H. Ligon
Francis C. Mayle, Jr.
Edward S. Mehlman
Margaret T. Snow

Prince George's County
Stanley A. Forster
John E. Jeffrey
Zorayda M. Lee-Llacer
George S. Malouf, Jr.
*Abdul Nayeem
David N. Robb
*Elie A. Sayan
Frederick Wilhelm

Queen Anne's County
John R. Smith, Jr. (C)

St. Mary's County
J. Roy Guyther (C)

Talbot County
Alfred A. Leszczynski
Gregg Rhodes

Washington County
Edward W. Ditto, III

Wicomico County
Hilda I. Houlihan

Worcester County
Federico Arthes (C)

Student Component
William E. Venanzi (C)

Board of Medical Examiners
Arthur T. Keefe, Jr.

Council
Albert M. Antlitz
Raymond M. Atkins
Ira N. Brecher
Aurelio De La Paz
Benjamin Del Carmen
Donald H. Dembo
Michael R. Dobridge
James T. Estes
Vincent D. Fitzpatrick
Arthur L. Gudwin
Frederick J. Hatem
John H. Hebb
Leon E. Kassel
Robert G. Kindred
Reynaldo L. Lee-Llacer
Donald T. Lewers
George S. Malouf
Leslie R. Miles, Jr.
J. David Nagel
Hiroshi Nakazawa
Charles F. O'Donnell
Gary L. Rosenberg
Aubrey C. Smoot
Roland T. Smoot
Joseph Snyder
Baltasar B. Velez
Israel H. Weiner
Jose M. Yosuico

Also present were staff personnel.

Introduction of Guests

The President introduced the following invited guests to those in attendance:

Richard L. Fields MD, President, The Medical Society of Virginia
Charles E. Turner MD, President, West Virginia State Medical Association

Board of Medical Examiners Election

The President announced the results of the election of the Board of Medical Examiners conducted on Wednesday, April 29, 1987 at the General Membership Meeting following the first session of the House of Delegates.

Elected to four-year terms:
Chris Papadopoulos, Baltimore, Baltimore City
(June 30, 1987–June 30, 1991)
Thomas M. Wilson, Bethesda, Montgomery County
(June 30, 1987–June 30, 1991)

Election of Officers

The President read the list of nominees for the various offices. By unanimous consent, nominations were re-opened and Herman C. Maganzini MD, Bethesda, was nominated from the floor to fill a vacancy on the Committee on Scientific Activity.

There being two nominations for the office of AMA Alternate Delegate (student position), the President read to the members the Bylaw provision requiring a ballot vote. All remaining positions being uncontested, by unanimous consent, the ballot was dispensed with and the following were elected by unanimous voice vote:

President-elect
Michael R. Dobridge, Silver Spring, Montgomery County (President-elect 1987–88) (President 1988–89)
First Vice-President
Marvin Schneider, Wheaton, Montgomery County (1988)
Second Vice-President
Hilary T. O'Herlihy, Glen Burnie, Anne Arundel County (1986)
Third Vice President
J. Richard Lilly, Hyattsville, Prince George's County (1988)
Secretary
Raymond M. Atkins, Baltimore, Baltimore City (1988)
Treasurer
Jose M. Yosuico, Laurel, Baltimore City (1988)
Committee on Scientific Activity (6-year term—1988–1994)
Victor R. Hrehorovich, Baltimore, Baltimore City
Finney Fund Committee (5-year term—1988–1993)
Herman C. Maganzini, Rockville
Delegates to the AMA
Donald T. Lewers, Easton, Talbot County
(January 1, 1988–December 31, 1990)
George S. Malouf, Hyattsville, Prince George's County
(January 1, 1988–December 31, 1990)
Alternate Delegates to the AMA
John H. Hebb, Baltimore, Baltimore County
(January 1, 1988–December 31, 1990)
Henry N. Wagner, Jr., Baltimore, Baltimore City
(January 1, 1988–December 31, 1990)
Vacancy (Student)
(January 1, 1987–December 31, 1989)

The President read the nominations for election to the office of AMA Alternate Delegate, student position:

William E. Venanzi, Baltimore
Stephanie Linder, Baltimore

The President by unanimous consent, declared the polls open, and, after all votes had been cast, declared the polls closed.

The Tellers reported the following:

Number of votes cast 90
Number needed to elect 46
William E. Venanzi received 57
Stephanie Linder received 33

The President declared Mr. Venanzi elected to the position of AMA Alternate Delegate.

MMPAC Report

J. Andrew Sumner MD, Chairman of the Maryland Medical Political Action Committee, made a report to the House of Delegates, which will be published in the annual reports.

Auxiliary Report

Mrs. Nancy Howell, Auxiliary President, made a report to the House of Delegates which will be published in the annual reports. Upon conclusion of the report, Mrs. Howell received a standing ovation from the Delegates.

Dr. Weiner Honored

The President introduced Israel "Sonny" Weiner MD, Legislative Committee Chairman, and praised him for his leadership during the past legislative session. Dr. Weiner received a standing ovation by the House members.

Building Committee Report

George S. Malouf MD, Chairman, reported on the progress of the renovation of the building and reminded those members who had not paid the assessment of $100 to the building fund to do so as soon as possible.

Reference Committee Report

Aubrey C. Smoot MD, Chairman of the Reference Committee, reported on Resolution 1S/87 and on behalf of the Committee, moved that the resolution be adopted. Resolution 1S/87 was adopted as follows:

Resolution 1S/87

Whereas, Maryland is a medically highly regulated state where costs of medical care compare favorably with the national average;

Whereas, The Delmarva Foundation for Medical Care has been awarded the PRO contract for Maryland for the next two years;

Whereas, The PRO contract has been distributed to providers (hospitals) allowing time for review;

Whereas, Review of this contract as well as review of additional information which has been distributed makes clear the fact that criteria for hospital utilization will become much more stringent; and

Whereas, This undoubtedly will continue to erode the quality of care as we know it and further destroy the art and compassion of the doctor-patient relationship; be it therefore

Resolved, That the Medical and Chirurgical Faculty go on record as encouraging its members and, indeed, all of the physicians of Maryland, to maintain as their top priority the quality care of each individual patient, and that should there be a conflict between quality of care and regulations promulgated by the Delmarva PRO, quality care must always take precedence.

New Business: MED-CHI Organization Study

The subject of the establishment of an ad hoc committee to study the organizational restructure of Med-Chi referred to at the preceding meeting was introduced. After debate, the following motion was adopted:

That the Council include two or more members of the House of Delegates on the ad hoc committee (to be appointed by the Council Chairman) to study organizational structure.

Med-Mutual Proxies

Carol Bender MD, Montgomery County, introduced a motion which, after adoption of a motion permitting its consideration without notice by a ⅔ vote, and after debate and amendment, was adopted as follows:

That the Medical and Chirurgical Faculty of the State of Maryland solicit and collect proxies for the next annual meeting of the Medical Mutual Liability Insurance Society of Maryland, assigning the proxies to a Med-Chi designate who is an insured of Medical Mutual.

House of Delegates Procedures

Edward S. Mehlman MD, Bethesda, introduced a 3-part motion that was divided and considered separately. The first division, as follows, was considered, and, after debate and amendment, was referred to the Executive Committee for study:

Awards shall not be presented as a general rule during House of Delegates' meetings. A separate awards luncheon, dinner meeting, or awards ceremony are suggested alternatives.

The second division was considered as follows and rejected:

Materials distributed to members of the House of Delegates in written form are not to be read at the Delegates' meeting unless specific requests for the readings are made. Examples are minutes, treasurers' reports, resolutions.

The third division considered by the House was defeated as follows:

The necrology shall not be read unless a specific request for reading is made. It also falls under Section (b) of this motion.

President's Remarks

The President addressed the House and expressed his appreciation for the privilege of serving as President.

The President advised Councilors of a meeting of the new Council to convene immediately at the adjournment of the House. He administered the oath of office to the incoming President, Leon E. Kassel MD, and the exchange of the gavel took place. Dr. Kassel briefly addressed the House.

By unanimous consent, the President declared the meeting adjourned *sine die* at 3:50 p.m.

RAYMOND M. ATKINS **MD**
Secretary



Incoming president Leon E. Kassel MD (right) receiving the presidential gavel from his predecessor, Donald T. Lewers MD.

Ad Hoc Policy on AIDS

Mr. President and Members of the House of Delegates:

The Ad Hoc Policy Advisory Committee on AIDS was formed in 1985 to study the issues concerning the growing epidemic of AIDS and to educate members of the society on treatment of AIDS. The Committee is composed of physician-members of Med-Chi and representatives from local and State Health Departments, the Health Education Resource Organization, and the Center for Health Education.

One major task undertaken by this committee in the last several months has been an attempt to bring AIDS education into the public school system throughout Maryland. The Committee formulated a statement that was accepted by the Faculty's House of Delegates encouraging Maryland school boards to incorporate AIDS education into their curriculum beginning at the third grade level. This statement was made in concurrence with the Surgeon General's report on AIDS. The Chairman and members of the Committee have been meeting with local school boards throughout the state to offer the Committee's assistance and expertise in the area of AIDS education. It is believed this Committee is responsible for the inclusion of AIDS education into some of the local school curricula for the upcoming school year. This task will continue until the children of this state receive the education required in this particular area.

This year also saw the reactivation of the Joint Medicolegal Committee on AIDS. This subcommittee includes members of both the medical and the legal professions. Its purpose is to consider specific legal issues pertaining to AIDS and also to educate physicians and attornies about the issues surrounding AIDS.

Many areas of concern were discussed throughout the past year, and the Committee will continue to review all information available and will develop appropriate educational materials for physicians and the public. The Chairman appreciates the work and dedication of the members of the Committee.

***J.D. DRINKARD,* MD, Chairman**
***ROBERT ANCONA* MD**
***BERNARD BRANSON* MD**
***DIANE DWYER* MD**
***DONALD J. FISHMAN* MD**
***EMMANUEL FRANCOIS* MD**
PAUL FREELAND
***JOYCE HARPER* MD**
***EDWARD HOPF* MD**
***EBENEZER ISRAEL* MD, MPH**
***MICHAEL L. LEVIN* MD**
***DIANE MATUSAK* MD**
***JOHN E. MAUPIN Jr.,* DDS, MBA**
***HELEN B. McCALLISTER* MD**
***DONALD M. PACHUTA* MD**
***STANLEY M. ROSEN* MD**
***MARGARET SHERRARD* MD**
***JOSEPH THOMASINO* MD**
***CARMINE VALENTE* PhD**

Alcoholism and Chemical Dependency

Mr. President and Members of the House of Delegates:

At the close of the 1987 Annual Meeting, the Committee on Alcoholism and Chemical Dependency completed its ninth year as a full standing committee of the Faculty. The Committee has held regular monthly meetings throughout the year with one major goal: to educate the medical profession and the public with respect to alcoholism and chemical dependency as illnesses.

The Committee continues to maintain a broad membership by drawing on the expertise of physicians as well as representatives from the Department of Health and Mental Hygiene, the Baltimore City Health Department, the American Council on Alcoholism, clergy, and major industrial companies throughout Maryland. In an effort to expand the educational efforts of this committee in 1986, we have included the expertise of additional health professionals: a representative from the Maryland Nurses Association, the Maryland Psychological Association, and the Maryland State Dental Association.

The Committee met with representatives from different state agencies whose employees deal with individuals intoxicated either by alcohol or drugs. These agencies included the Drug Abuse Administration, the Baltimore City Police Department, an attorney who defends DWI offenders, and also a representative of the SmartDrinkers Program. An exchange of information, ideas, and concerns with these representatives has aided all of us in our goal to help those individuals and families who have addiction problems.

The Committee participated in the consideration of legislation as introduced into the 1987 General Assembly. Several Committee members, in conjunction with Faculty legislative protocol, visited Annapolis to testify.

The Committee participated in the 1987 Annual Meeting by planning and cosponsoring a scientific session with several other committees. The session, "Update 1987: Substance Abuse in Adolescents and Young Adults," was attended by over 80 individuals and received favorable reports.

Many other areas of concern were discussed throughout the year. We continue to strive to educate residents of Maryland about the deadly diseases of alcoholism and chemical addiction.

The Chairman wishes to thank the Faculty, the Com-

mittee members, and our staff for its help and support of the Committee's activities.

***BRUCE T. TAYLOR* MD, Chairman**
***CONRAD B. ACTON* MD**
***RICHARD ANDERSON* MD**
***FEDERICO G. ARTHES* MD**
***MICHAEL R. BOWEN* MD**
***HENRY J. FARKAS* MD**
***CLAUDE R. FEINSTEIN* MD**
***W. RICHARD FERGUSON* MD**
***ROLAND FRIEDRICH* MD**
***N. JOSEPH GAGLIARDI* MD**
***PAUL F. GUERIN* MD**
***JOHN H. HIRSCHFELD* MD**
***LORI D. KARAN* MD**
***HARRY F. KLINEFELTER* MD**
***SIDNEY J. MALAWER* MD**
***MICHAEL D. POTASH* MD**
***NORMAN A. POULSEN* MD**
***ABRAHAM M. SCHNEIDMUHL* MD**
***MAXWELL N. WEISMAN* MD**

Advisory Members

RONALD FLAMER
***ARTHUR MACNEIL HORTON, Jr.*, EdD**
***ISADORE KAPLAN* MD**
LUDWIG L. LANKFORD
***MARIE McCARTHY* RN**
PHIL McKENNA
ROBERT MILLER
***PHILIP P. NOLAN* DDS**
REVEREND MICHAEL G. ROKOS

American Medical Association Education and Research Foundation (AMA-ERF)

Mr. President and Members of the House of Delegates:

Faculty Contributions
June 1, 1986–May 31, 1987

Allegany County	$ 285
Anne Arundel County	1,425
Baltimore City	3,930
Baltimore County	2,620
Calvert County	90
Caroline County	—
Carroll County	195
Cecil County	150
Charles County	105
Dorchester County	90
Frederick County	270
Garrett County	75
Harford County	735
Howard County	600
Kent County	75
Montgomery County	5,690
Prince George's County	2,395
Queen Anne's County	15
St. Mary's County	75
Somerset County	—
Talbot County	480
Washington County	570
Wicomico County	720
Worcester County	30
Affiliate	15
Total	$ 20,635

• • •

Maryland Physicians' Direct Contributions
June 1986–April 1987 $ 9,348

• • •

AMA-ERF Checks Presented
Wednesday, April 29, 1987

University of Maryland School of Medicine	$25,453.56
Medical Student Assistance Fund	6,089.84
Johns Hopkins University School of Medicine	17,014.03
Medical Student Assistance Fund	4,190.83
Uniformed Services School of Medicine	7,389.00
Medical Student Assistance Fund	563.33

ELIZABETH A. LINHARDT
State Chairman AMA-ERF

Auxiliary

Mr. President and Members of the House of Delegates:

Most everyone is familiar with the duties of any presidency, but ours is special in that part of our business is making friends. During the months of May and June, the President has the pleasure of visiting all the component auxiliaries and installing their officers. This is the most enjoyable and satisfying "job" of all. From Allegany to Wicomico and Harford to Prince George's and all the counties in between, I saw old friends and made new ones. I wish that each and every auxilian could be president so that they could share those feelings. I thank everyone from the bottom of my heart for the warmth I received visiting those counties.

Another duty as President was to attend the Council Meetings of Med-Chi. At those meetings, I was privileged to hear the concerns and thoughts of the physicians as they struggle through some very hard times. These people are not lawyers or accountants or politicians or insurancemen, but they are being forced to

know a lot about all these things in order to survive. The auxiliary has assisted with the legislative effort and the malpractice tort reform movement, and I expect the Auxiliary will become more involved in the future. Med-Chi does need all the help and support it can get in Annapolis, and since we're the "other half," that support and help should come from us.

Another area of concern for Med-Chi and the Auxiliary is membership. We are making headway in that field, but we must continue to go out to get new members and to retain the old. Our strength comes in our numbers, and we must look for new ways to meet the concerns and demands of the younger physician's spouse, male or female. As the medical school population becomes increasingly female, our potential members will become increasingly male. We must come up with some plan to accommodate them. We must also consider the two-career family not only among new members but also as the older, established auxilian goes out into the business world. The times are changing. Are we?

Two major accomplishments on the state level have been the Multi-State Meeting, "Stress in the Medical Family," and the Annual Meeting session, "Survival Tactics for the Modern Medical Family." The multi-state meeting, in conjunction with auxiliaries from Virginia and West Virginia, focused on physician impairment, leisure, and the medical marriage. I thank Dr. Donald Drinkard for initiating the highly successful seminar on survival tactics that was co-sponsored by Sheppard Pratt Hospital and our state auxiliary.

Our auxiliary has been blessed with many wonderful presidents in the past, and I have come to rely on them for help and encouragement. Maryland is doubly blessed in that one of our own past-presidents has been selected to lead our national organization. Mary Strauss of Washington County has been nominated President-Elect of the American Medical Association Auxiliary. All of us know how special Mary is to us, and now we will be sharing her with the rest of the country. It is my hope that in the coming years, we will all pull together, better than ever, to support Mary and show what a great state Maryland is.

I look forward to turning the reins over to Ching Barretto. I will miss many of the privileges of the presidency, but the friendships are mine to keep forever. Each Annual Meeting brings the end of one era and the birth of another; that change is part of growth. At the beginning of the year, I spoke of the need for change in order to continue growing. Change has taken place in this organization, and change has taken place in me. I have learned much about patience and understanding as I attempted to bring about some change in the organization. The change Ching will bring with the coming year will be another chance for the Auxiliary to continue growing.

***NANCY HOWELL,* President**
1986–1987

Continuing Medical Education Review

Mr. President and Members of the House of Delegates:

The committee held five meetings during this past year. Action was taken on the following organizations that are accredited by Med-Chi to provide intrastate Category I continuing medical education offerings:

1. American Cancer Society—Maryland Division
2. American Heart Association—Maryland Affiliate
3. American Lung Association of Maryland
+ 4. Anne Arundel General Hospital
5. Baltimore County General Hospital
6. Bon Secours Hospital
7. Carroll County General Hospital
8. Center for Health Education, Inc.
9. Chestnut Lodge
10. Children's Hospital, Inc.
11. Church Hospital Corporation
12. Community Psychiatric Clinic, Inc.
13. Crownsville Hospital Center
14. AMI Doctors' Hospital of Prince George's County
15. Dorchester General Hospital
16. Fallston General Hospital
17. Franklin Square Hospital
18. Frederick Memorial Hospital
19. Good Samaritan Hospital
20. Greater Baltimore Medical Center
21. Greater Laurel-Beltsville Hospital
22. Harford Memorial Hospital
23. Holy Cross Hospital
24. Howard County General Hospital, Inc.
25. Kernan Hospital
26. Levindale Hebrew Geriatric Center and Hospital, Inc.
27. Liberty Medical Center
28. Maryland General Hospital
29. Maryland Hospital Education Institute
30. Maryland Psychiatric Society
31. Maryland Radiological Society
32. Memorial Hospital/Cumberland
33. Memorial Hospital/Easton
34. Mercy Hospital
35. Montgomery County Medical Society
36. Montgomery General Hospital
37. Montgomery Village Seminars
38. The Neurology Center, P.A.
39. North Arundel Hospital
40. North Charles General Hospital
41. Peninsula General Hospital
42. Prince George's County Medical Society
43. Prince George's General Hospital
44. Sacred Heart Hospital
45. St. Agnes Hospital
46. St. Joseph Hospital
+ 47. Shady Grove Adventist Hospital
48. Sheppard and Enoch Pratt Hospital

49. Sinai Hospital
50. South Baltimore General Hospital
51. Southern Maryland Hospital, Inc.
52. Spring Grove Hospital
53. Springfield Hospital Center
54. Suburban Hospital
55. Taylor Manor Hospital
56. Union Memorial Hospital
57. University Health Center, University of Maryland
58. Veterans Administration Hospital, Perry Point
59. Washington Adventist Hospital
60. Washington County Hospital
* 61. Calvert Memorial Hospital

+ indicates accreditation was renewed during 1986–1987

* indicates hospital eliminated program during 1986–1987

Those hospitals/organizations having no marking were granted accreditation in previous years.

The committee held its Fifth Annual Meeting of Directors of Continuing Medical Education during Med-Chi's 189th Annual Meeting.

IAN ANDERSON **MD, Chairman**
JONATHAN D. BOOK **MD**
RICHARD F. CIOFFI **MD**
IRVIN H. COHEN **MD**
DAVID T. CRAWFORD **MD**
WORTH B. DANIELS **MD**
JOHN M. DENNIS **MD**
SALVATORE DONOHUE **MD**
KEVIN N. HENNESSEY **MD**
CHARLES F. HOBELMANN, Jr., **MD**
JOHN C. HYLE **MD**
CAROL J. JOHNS **MD**
HENRY H. KWAH **MD**
EUGENE P. LIBRE **MD**
ABDUL NAYEEM **MD**
IBRAHIM A. RAZZAK **MD**
R. KENNEDY SKIPTON **MD**
EDWIN H. STEWART, Jr., **MD**
BERNARD TABATZNIK **MD**
JOHN W. BULLARD **PhD (Advisory)**
JACK L. MASON **PhD (Advisory)**

Delegation to the AMA House of Delegates Interim Meeting

Mr. President and Members of the House of Delegates:

Your delegation attended the annual session of the AMA House of Delegates from December 7–10, 1986 in Las Vegas and reports the following summary of actions taken at this meeting.

MD–DRG–Medicare Reimbursement

The government's plan to roll physician reimbursement into Medicare payments to hospitals is being vigorously opposed by the AMA.

The House adopted a resolution that adequate and appropriate resources of the Federation of American Medicine be mobilized forthwith to impress upon the President and the Congress the danger this proposal represents and the threat it poses to the American people.

While members of the House began contacting their Congressmen and Senators to express opposition to the proposal, the AMA issued the following statement:

> The proposal is unrealistic, unreasonable, unwise and unhealthy for our senior citizens and other beneficiaries of the Medicare program. Merely saying that such a system would be almost impossible to administer, or that the proposal is premature, since Congress has already mandated a study of physician payment systems under Medicare, only addresses the fringes of OMB's proposal.
>
> The real point of this is that the proposal represents just one more step on the road to rationing of care for Medicare beneficiaries. We simply don't think that's acceptable; and we believe that Medicare beneficiaries will join us in resisting these proposals ultimately aimed at rationing medical care.

Peer Review Organizations (PROS)

The House of Delegates considered a comprehensive report and a number of resolutions on the many problems physicians are having with the federal government's peer review program (PRO): The House adopted the report from the Council on Medical Service which

- described current directions in the PRO program and recent legislative mandates having an impact on PRO contained in COBRA and OBRA.
- discussed issues raised by the operation of the Super PRO and imposition of sanctions by PROs, and the authority for PROs to deny payment on the basis of quality.

The report recommends that:

- the AMA develop draft federal legislation providing that a PRO shall not notify a beneficiary of a PRO determination that the quality of services provided does not meet professionally recognized standards of health care until the physician has
  1. obtained a PRO reconsideration of the determination
  2. exhausted rights to judicial review of any adverse reconsideration decisions.

In adopting the report the delegates stressed the need for immediate action concerning the issue of beneficiary notification of quality denials.

The House also referred a resolution for action calling on the AMA to

- communicate with the Department of Health and Human Services the AMA's desire to seek greater PRO discretion in the determination and handling of sanction recommendations.
- undertake legal action, as appropriate, to assure that physicians are accorded due process appeal rights in the course of PRO sanction and appeal

processes.
- urge that reconsiderations and appeals of PRO actions be heard before panels of physicians in active practice.

The House adopted another resolution that asked the AMA to
- enlist the aid of Medicare patients by encouraging them to voice any valid concerns with the PRO program to their elected federal officials.
- encourage individual physicians to facilitate such valid patient complaints against the PRO program and forward such complaints to the AMA.

New AMA Strategic Plan

In a major effort to strengthen public and professional confidence in the AMA, the delegates adopted a new strategic plan for the Association. The plan contains a new key objective for the Association and four strategies to provide the AMA with an effective approach to meet future challenges.

As adopted by the House, the AMA's new key objective reads:

> The key objective of the American Medical Association is to contribute to the professional and personal development of member physicians and to the betterment of the health of the public by developing and distributing information; by advocating health-related rights, responsibilities, and issues; and by representing the profession as a whole where the image, expertise, and national scope of the AMA prove useful. This is to be done in a manner that is cost effective, protects physician autonomy and self-determination, improves the practice of medicine, and builds public confidence in the competence and the reliability of physicians.

The four strategies are:

> *Strategy one:* Strengthen the Association's visibility among the profession and the public while enhancing its reputation for competence, objectivity, and commitment to excellence.
>
> *Strategy two:* Shift the development of Association products and services from a product-driven to a market-driven approach based on an accurate determination of physician and public needs as well as a realistic appraisal of the likelihood for a positive return on the Association's investment.
>
> *Strategy three:* Visibly personify the best in medicine by promoting excellence in health care and in all that the Association does and represents.
>
> *Strategy four:* Utilize the Association's key objective as a driving force to redirect and sharpen the focus of activities throughout the organization and to enhance the AMA's management structure and process to facilitate the most effective and efficient implementation of such activities.

AMA Budget—Fiscal 1987

The House approved the consolidated budget for fiscal year 1987. The budget includes:
- $151,410,000 in operating revenues
- $147,190,000 in operating expenses
- no dues increase for 1987

Negotiations by Physicians

The House considered an indepth report on the issue of meeting physicians' needs in the area of negotiations. The report
- reviews physicians' need for information and representation in negotiation and contract issues
- outlines legal aspects involved
- describes potential courses of action that could be taken by the AMA or the Federation to assist physicians in the general area of negotiations.

Teen Health

Calling for a truly comprehensive approach to the overall health needs of young people, the House approved a report outlining a new AMA initiative in adolescent health care.

The report identified five major factors contributing to the problems of adolescents:
- substance abuse
- sexuality/pregnancy
- victimization
- psychological disorders/suicide
- violent crime

The report recognized that a successful initiative will require sustained commitment to produce the desired improvement in adolescent health.

Guidelines on AIDS

The House accepted two reports on AIDS that
- provided physicians with guidelines to help them in responding to questions regarding AIDS
- opposed acts of categorical discrimination against AIDS patients, HIV positive individuals, and persons at increased risk of developing AIDS.

Use of Animals in Research

In a number of actions related to the use of animals in research, the House:
- reaffirmed AMAs unequivocal endorsement for the humane care, treatment, and proper stewardship of animals in research
- opposed the illegal acts of so-called "animal liberationists"
- continued to defend and promote the use of animals in meaningful research, product safety testing, and teaching programs
- committed resources to public educational programs
- supported the policy of obtaining animals for medical research and education from animal control units and study ways to ensure that the animals used are indeed unwanted and abandoned.

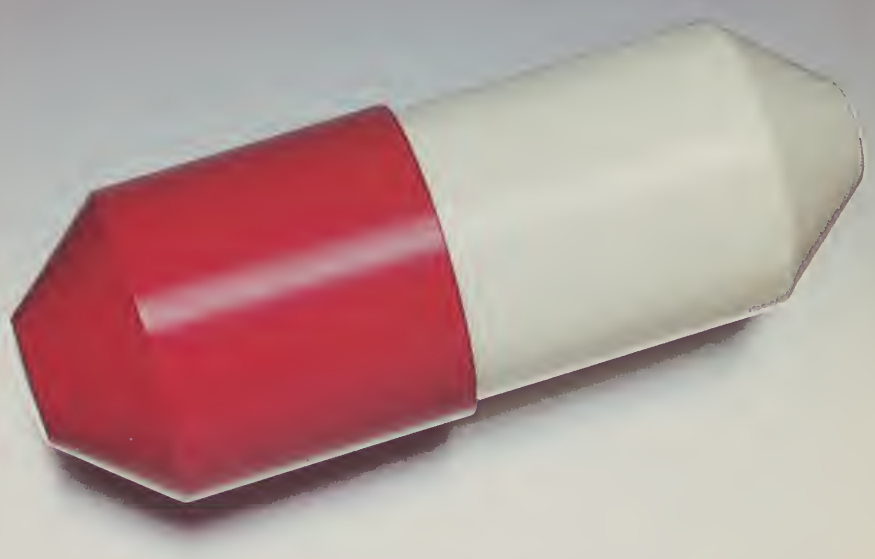
Health Policy Agenda for the American People

The House considered a status report on the massive project to formulate a health policy agenda for the American people. The Board reported that:
- HPA's final report is scheduled to be released in

In Hypertension*... When You Need to Conserve K^+

Remember the Unique Red and White Capsule: Your Assurance of SK&F Quality

Serum K^+ and BUN should be checked periodically (see Warnings and Precautions).



Before prescribing, see complete prescribing information in SK&F CO. literature or *PDR*. The following is a brief summary.

WARNING

This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

Contraindications: Concomitant use with other potassium-sparing agents such as spironolactone or amiloride. Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K^+ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K^+ intake. Associated widened QRS complex or arrhythmia requires prompt additional therapy. Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available. Sensitivity reactions may occur in patients with or without a history of allergy or bronchial asthma. Possible exacerbation or activation of systemic lupus erythematosus has been reported with thiazide diuretics.

Precautions: The bioavailability of the hydrochlorothiazide component of 'Dyazide' is about 50% of the bioavailability of the single entity. Theoretically, a patient transferred from the single entities of triamterene and hydrochlorothiazide may show an increase in blood pressure or fluid retention. Similarly, it is also possible that the lesser hydrochlorothiazide bioavailability could lead to increased serum potassium levels. However, extensive clinical experience with 'Dyazide' suggests that these conditions have not been commonly observed in clinical practice. Angiotensin-converting enzyme (ACE) inhibitors can elevate serum potassium; use with caution with 'Dyazide'. Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids, and during concurrent use with amphotericin B or corticosteroids or corticotropin [ACTH]). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Cumulative effects of the drug may develop in patients with impaired renal function. Thiazides should be used with caution in patients with impaired hepatic function. They can precipitate coma in patients with severe liver disease. Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic and hemolytic anemia have been reported with thiazides. Thiazides may cause manifestation of latent diabetes mellitus. The effects of oral anticoagulants may be decreased when used concurrently with hydrochlorothiazide; dosage adjustments may be necessary. Clinically insignificant reductions in arterial responsiveness to norepinephrine have been reported. Thiazides have also been shown to increase the paralyzing effect of nondepolarizing muscle relaxants such as tubocurarine. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. Triamterene has been found in renal stones in association with the other usual calculus components. Therefore, 'Dyazide' should be used with caution in patients with histories of stone formation. A few occurrences of acute renal failure have been reported in patients on 'Dyazide' when treated with indomethacin. Therefore, caution is advised in administering nonsteroidal anti-inflammatory agents with 'Dyazide'. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine. Hypokalemia is uncommon with 'Dyazide', but should it develop, corrective measures should be taken such as potassium supplementation or increased dietary intake of potassium-rich foods. Corrective measures should be instituted cautiously and serum potassium levels determined. Discontinue corrective measures and 'Dyazide' should laboratory values reveal elevated serum potassium. Chloride deficit may occur as well as dilutional hyponatremia. Concurrent use with chlorpropamide may increase the risk of severe hyponatremia. Serum PBI levels may decrease without signs of thyroid disturbance. Calcium excretion is decreased by thiazides. 'Dyazide' should be withdrawn before conducting tests for parathyroid function. Thiazides may add to or potentiate the action of other antihypertensive drugs. Diuretics reduce renal clearance of lithium and increase the risk of lithium toxicity.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances; postural hypotension (may be aggravated by alcohol, barbiturates, or narcotics). Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and respiratory distress including pneumonitis and pulmonary edema, transient blurred vision, sialadenitis, and vertigo have occurred with thiazides alone. Triamterene has been found in renal stones in association with other usual calculus components. Rare incidents of acute interstitial nephritis have been reported. Impotence has been reported in a few patients on 'Dyazide', although a causal relationship has not been established.

Supplied: 'Dyazide' is supplied as a red and white capsule, in bottles of 1000 capsules; Single Unit Packages (unit-dose) of 100 (intended for institutional use only); In Patient-Pak™ unit-of-use bottles of 100.

BRS-DZ:L42

Potassium-Sparing

DYAZIDE®

25 mg Hydrochlorothiazide/**50 mg** Triamterene/SKF

Over 20 Years of Confidence

The unique red and white Dyazide® capsule: Your assurance of SK&F quality.

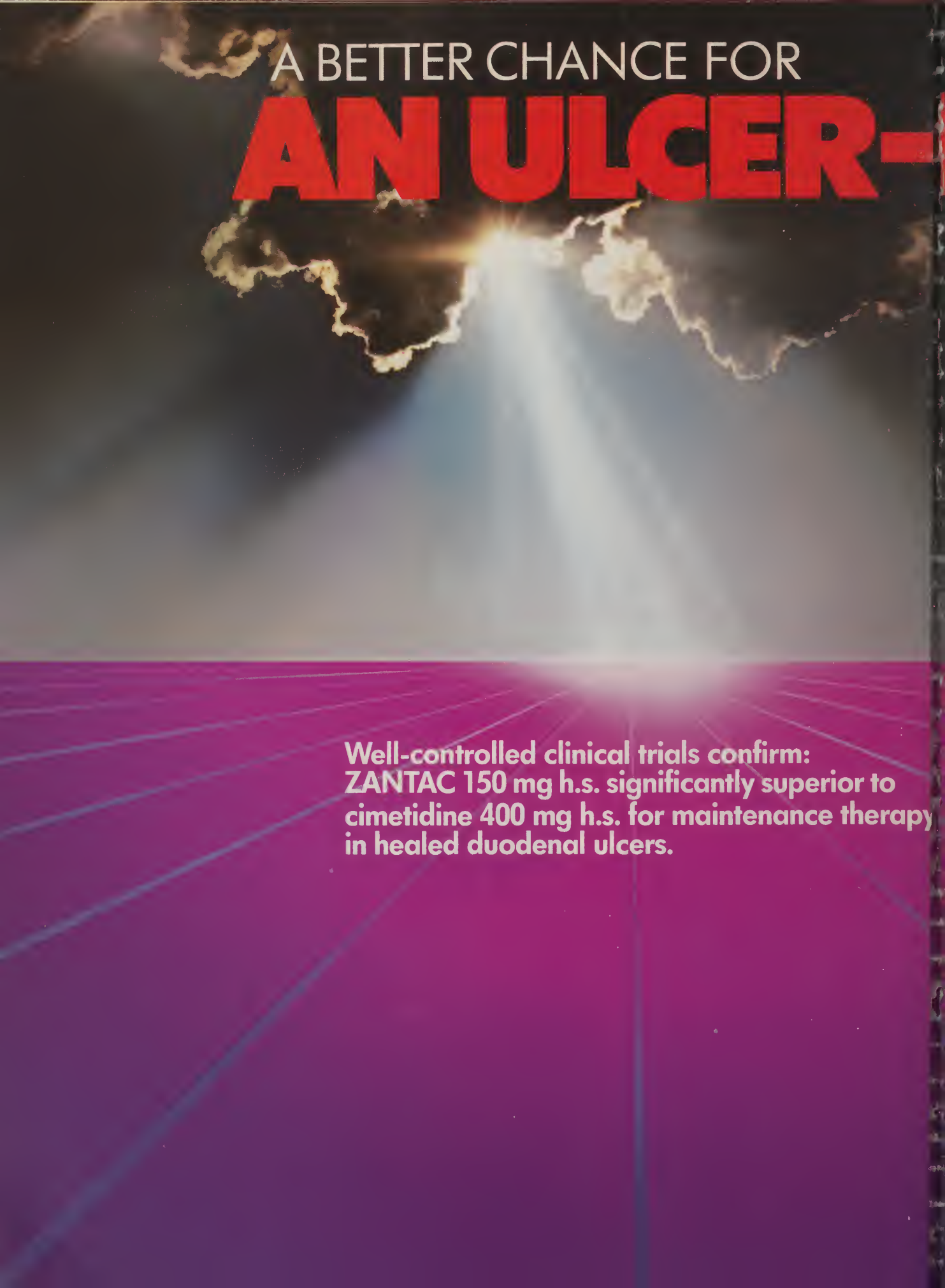


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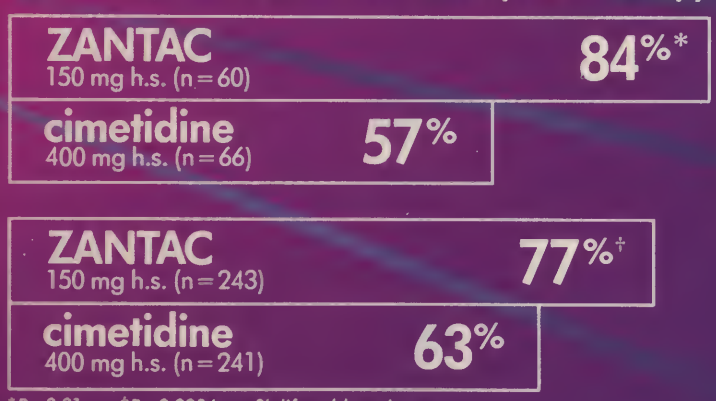
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A BETTER CHANCE FOR
AN ULCER-
Well-controlled clinical trials confirm:
ZANTAC 150 mg h.s. significantly superior to
cimetidine 400 mg h.s. for maintenance therapy
in healed duodenal ulcers.

FREE FUTURE

Percent of patients ulcer-free after 1 year of therapy



*P = 0.01 †P = 0.0004 % life-table estimates

All patients were permitted prn antacids for relief of pain.
Adapted from Silvis[1] and Gough[2]

These two trials[1,2] used the currently recommended dosing regimen of cimetidine (400 mg h.s.) and ranitidine (150 mg h.s.). A comparison of other dosing regimens has not been studied.
The studied dosing regimens are not equivalent with respect to the degree and duration of acid suppression or suppression of nocturnal acid.
The superiority of ranitidine over cimetidine in these trials indicates that the dosing regimen currently recommended for cimetidine is less likely to be as successful in maintenance therapy.

Zantac® 150 h.s.

ranitidine HCl/Glaxo 150 mg tablets

Glaxo / ROCHE®

See next page for references and Brief Summary of Product Information.

ZAN375 July 1987

References: 1. Silvis SE, Griffin J, Hardin R, et al: Final repart an the United States multicenter trial camparing ranitidine ta cimetidine as maintenance therapy fallawing healing af duadenal ulcer. *J Clin Gastraenteral* 1985;7(6):482-487.
2. Gaugh KR, Karman MG, Bardhan KD, et al: Ranitidine and cimetidine in preventian af duadenal ulcer relapse: A dauble-blind, randamised, multicentre, camparative trial. *Lancet* 1984;ii:659-662.

ZANTAC® 150 Tablets
(ranitidine hydrochloride)
ZANTAC® 300 Tablets
(ranitidine hydrochlarlde)

BRIEF SUMMARY OF PRODUCT INFORMATION

The fallawing is a brief summary anly. Befare prescribing, see complete prescribing infarmatian in ZANTAC® praduct labeling.

INDICATIONS AND USAGE: ZANTAC® is indicated in:
1. Shart-term treatment af **actlve duodenal ulcer.** Mast patients heal within faur weeks.
2. **Maintenance therapy** for duadenal ulcer patients at reduced dasage after healing af acute ulcers.
3. The treatment af **pathological hypersecretory canditions** (eg, Zallinger-Ellisan syndrame and systemic mastacytosis).
4. Shart-term treatment af **actlve, benign gastric ulcer.** Mast patients heal within six weeks and the usefulness af further treatment has nat been demanstrated.
5. Treatment af **gastroesophageal reflux disease (GERD).** Symptamatic relief cammanly accurs within ane ar twa weeks after starting therapy and is maintained thraughaut a six-week caurse af therapy.

In active duadenal ulcer; active, benign gastric ulcer; hypersecretary states; and GERD, cancamitant antacids shauld be given as needed far relief af pain.

CONTRAINDICATIONS: ZANTAC® is cantraindicated far patients knawn ta have hypersensitivity ta the drug.

PRECAUTIONS: Symptamatic respanse ta ZANTAC® therapy daes nat preclude the presence af gastric malignancy.

Since ZANTAC is excreted primarily by the kidney, dasage shauld be adjusted in patients with impaired renal functian (see **DOSAGE AND ADMINISTRATION**). Cautian shauld be abserved in patients with hepatic dysfunctian since ZANTAC is metabalized in the liver.

False-positive tests far urine pratein with Multistix® may accur during ZANTAC therapy, and therefare testing with sulfasalicylic acid is recammended.

Althaugh recammended dases af ZANTAC da nat inhibit the actian af cytachrame P-450 enzymes in the liver, there have been isalated reparts af drug interactians which suggest that ZANTAC may affect the biaavailability af certain drugs by same mechanism as yet unidentified (eg, a pH-dependent effect an absarptian ar a change in valume af distributian).

Lack af experience ta date precludes recammending ZANTAC far use in children ar pregnant patients. Since ZANTAC is secreted in human milk, cautian shauld be exercised when administered ta a nursing mather.

ADVERSE REACTIONS: Headache, sametimes severe, seems ta be related ta ZANTAC® administratian. Canstipatian, diarrhea, nausea/vamiting, and abdaminal discamfart/pain have been reparted. There have been rare reparts af malaise, dizziness, samnalence, insamnia, vertiga, tachycardia, bradycardia, premature ventricular beats, and arthralgias. Rare cases af reversible mental canfusian, agitatian, depressian, and hallucinatians have been reparted, predaminantly in severely ill elderly patients.

In narmal valunteers, SGPT values were increased ta at least twice the pretreatment levels in 6 af 12 subjects receiving 100 mg qid IV far seven days, and in 4 af 24 subjects receiving 50 mg qid far five days. With aral administrotion there hove been accasianal reparts af reversible hepatitis, hepatacellular ar hepatacanalicular ar mixed, with ar withaut jaundice.

There have been rare reparts af reversible leukapenia, granulacytapenia, thrombocytapenia, and pancytapenia.

Althaugh cantralled studies have shawn na antiandragenic activity, accasianal cases af gynecamastia, impatence, and lass af libida have been reparted in male patients receiving ZANTAC, but the incidence did nat differ fram that in the general papulatian.

Incidents af rash, including rare cases suggestive af mild erythema multiforme, and, rarely, alapecia, have been reparted, as well as rare cases af hypersensitivity reactians (eg, branchaspasm, fever, rash, easinaphilia) and small increases in serum creatinine.

OVERDOSAGE: Infarmatian cancerning passible averdasage and its treatment appears in the full prescribing infarmatian.

DOSAGE AND ADMINISTRATION: Active Duodenal Ulcer: The current recammended adult aral dasage is 150 mg twice daily. An alternate dasage af 300 mg ance daily at bedtime can be used for patients in wham dasing canvenience is impartant. The advantages af ane treatment regimen campared to the other in a particular patient papulatian have yet ta be demanstrated.

Maintenance Therapy: The current recammended adult oral dasoge is 150 mg at bedtime.

Pathalagical Hypersecretary Canditions (such as Zollinger-Ellison Syndrome): The current recammended adult aral dasage is 150 mg twice a day. In same patients it may be necessary to administer ZANTAC 150-mg doses mare frequently. Dases shauld be adjusted ta individual patient needs, and shauld cantinue as lang as clinically indicated. Dases up ta 6 g/day have been employed in patients with severe disease.

Benign Gastric Ulcer: The current recammended adult aral dasage is 150 mg twice a day.

GERD: The current recammended adult aral dasage is 150 mg twice a day.

Dosage Adjustment for Patients with Impaired Renal Functlon: On the basis af experience with a graup af subjects with severely impaired renal function treated with ZANTAC, the recammended dasage in patients with a creatinine clearance less than 50 ml/min is 150 mg every 24 haurs. Shauld the patient's canditian require, the frequency af dasing may be increased ta every 12 haurs ar even further with cautian. Hemadialysis reduces the level af circulating ranitidine. Ideally, the dasage schedule shauld be adjusted sa that the timing af a scheduled dose caincides with the end af hemadialysis.

HOW SUPPLIED: ZANTAC® 300 Tablets (ranitidine hydrachlaride equivalent ta 300 mg af ranitidine) are yellaw, capsule-shaped tablets embassed with "ZANTAC 300" an ane side and "Glaxa" an the ather. They are available in battles af 30 (NDC 0173-0393-40) and unit dase packs of 100 tablets (NDC 0173-0393-47).

ZANTAC® 150 Tablets (ranitidine hydrachlaride equivalent ta 150 mg af ranitidine) are white tablets embassed with "ZANTAC 150" an ane side and "Glaxa" an the ather. They are available in battles af 60 tablets (NDC 0173-0344-42) and unit dose packs af 100 tablets (NDC 0173-0344-47).

Store between 15° and 30°C (59° and 86°F) In a dry place. Protect from light. Replace cap securely after each opening.

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October 1986

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What you get back is immeasurable.

Just five hours a week. Just 5% of your income. It's not much to give, to the causes you really care about. But that small investment could change somebody's life. And it's hard to imagine a better return than that.

INDEPENDENT SECTOR

Ad Council

early 1987
- all HPA participating organizations have been sent a draft copy of the proposals
- an HPA Implementation Committee has been appointed by the Steering Committee to oversee implementation of HPA policy recommendations
- implementation of the HPA will be carried out primarily through the efforts of a number of coalitions that form around individual policy proposals or groups of similar proposals
- financing is being solicited for the administrative costs of the implementation effort, including staffing, meetings, publications, and mailings

Conclusion

AMA House meetings provide a unique educational opportunity and we would encourage you to attend and participate. Any member of the Association may present testimony at the Reference Committee hearings, and corridor discussions on the issues provide additional opportunities to get your views across.

If you can't come to the meeting you can still be represented through your delegate. Let your delegation know your opinions. You also can prepare a resolution and request it be submitted to the House.

Many AMA policies began with an individual physician who had a good idea and coaxed it through the democratic process.

Delegates

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PHILIP SCHNEIDER **MD (Resident)**
NICHOLAS GEORGES **(Student)**

Drugs

Mr. President and the Members of the House of Delegates:

The Committee on Drugs met eight times in the past year and interviewed 11 physicians. In addition, many pharmacy surveys have been received, and record reviews have been conducted on many other physicians as a result. Most problems with prescribing can be clarified and settled through an exchange of correspondence between the Committee Chairman and the physicians involved. On the other hand, several difficult and serious cases before the Committee have increased the awareness of Committee's importance as a consultant and advisor to the physicians and also as a watchdog of undesirable prescribing practices of Maryland physicians.

One of the most serious and most often reported problems brought to the Committee is the prescribing of pain medication (analgesics or narcotics). Some physicians seem to believe that more is better and continue to prescribe pain medication over extended periods, often without documented improvement in the patient's condition. Committee members believe physicians should review the available literature to update their knowledge of the effects and side effects of analgesics and narcotics as well as their interaction with other drugs.

To further carry out the charge to this Committee, members have written articles for publication in the *Maryland Medical Journal* that are expected to be published soon.

In an effort to strengthen all professional oversight activity, the Committee has planned discussions with the Commission on Medical Discipline to determine the proper protocol to be used for matters coming to the Committee's attention.

This Committee will strive to maintain its balance of educational and disciplinary value to the profession and to the community and will continue to be active in educating the few physicians who misuse their prescribing privileges.

The Chairman expresses his appreciation to the members of the Committee and to staff who have been so faithful in devoting their time to assisting in this task.

STEPHEN A. HIRSCH **MD, Chairman**
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Emergency Medical Services

Mr. President and Members of the House of Delegates:

The committee met five times during 1986–1987 and discussed a variety of matters related to emergency medicine:

a. Attempt to make Advanced Life Support (ALS) systems available to those counties in the state currently without such a system by encouraging county medical societies to support their establishment.
b. Recognition to ALS and Basic Life Support unit champions in the EMS Olympics expressing Med-

Chi's appreciation for their efforts.

c. Participation in EMS Week in 1987.
d. Good Samaritan Law re: rendering physicians immune from prosecution and liability when providing prehospital care.
e. Prehospital intratracheal intubation training; the committee passed a motion in support of physician participation in the training of Emergency Medical Technician-Paramedic students in this procedure.
f. Gaining access to a MASH unit in the event of an emergency.
g. Amtrak train disaster in Chase, Maryland.
h. HMOs and PPOs effect on emergency care.
i. Physician interference or assistance with prehospital care at the scene of an accident.

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Emotional Health

Mr. President and Members of the House of Delegates:

During 1986–87, the Committee on Emotional Health continued its work on two issues concerning the quality of health care in Maryland. We monitored the satisfactory progress made on the Coe Consent Decree and Contract. We continued our work with Medical Mutual on a Physician Support Group, under the leadership of Michael J. Bisco MD and with the help of Lino Covi MD and Glenn Brynes MD.

The Committee became involved with several important issues during the year. Concerns about Social Workers making medical diagnoses was expressed, explored, and continues to be researched. Work on the 1987 Annual Meeting Program cosponsorship of "Substance Abuse in Adolescents and Young Adults" was rewarded with an outstanding and very well attended presentation. Explanation of Insurance Benefit packages offered by Med-Chi, Third Party providers, and HMOs were explored effectively due to the work of Kenneth E. Fligsten MD, Stephen W. Siebert MD, and Mark Komrad MD. In addition, changes in the state's Mental Hygiene Administration under Governor Schaefer's direction were presented by Henry Harbin MD, a guest at our April 1987 meeting.

The Committee continues to be grateful to Lino Covi MD for his leadership and editorial input into "Today's Psychiatry," our column in the *MMJ*. Its scope has maintained its consistency with one of the Committees' major goals: To improve communication and collaboration between psychiatrists and other physicians in Maryland.

On a sad note, the Committee notes the death of Irene L. Hitchman MD and the absence of her years of experience and insight.

The Committee looks forward to a busy and productive 1987–88. The Chairman thanks each Committee member for his/her time and effort in working to improve the quality of care for Maryland's Citizenry.

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Executive Director

Mr. President and Members of the House of Delegates:

This past year has probably been one of the most interesting in my many years of working with physicians in both hospital and association environments. This year has seen many issues raised that have never been considered. Among them are the Maximum Actual Allowable Charges (MAACS), a major effort on the part of the government to cut medical costs; the DRGs for RAPs, an issue not yet resolved but one that has been of serious concern for physicians for some time; and the Legislative Liability Issue (AKA Tort Reform) of which we were fortunate to see some aspects accomplished. We have taken strong exception to the "Physicians' Fee Guide" (or Shoppers Guide), a listing of Medicare fee data. It appears that the Attorney General's office may more appropriately label it as a listing of Medicare fees.

The new building and concomitant renovation of the old building have been problems, because of contractor's delays; opening of the buildings is more than a year behind schedule. All efforts will be made to complete both buildings for occupancy by the September 1987 Semiannual Meeting of the Faculty.

This year membership surveys were sent out in a new effort to understand the problems of the practice of medicine as seen by member physicians.

Still under study is whether the medical society should establish a statewide IPA. Questions remain as to whether this is an appropriate mechanism to have in place to be ready to meet the challenges of the CHAMPUS Program.

Perhaps the most challenging of all situations is reflected in current journal articles. Not long ago, emphasis throughout the health care delivery system was targeted toward the improvement of patient care. Now the issue appears to be how much revenue a physician brings in to the hospital. Hospitals market "product presentation" of various medical specialties not necessarily to meet the needs of the patients but to obtain as much of the market as possible. It appears that the industry and government have forgotten that the purpose of the hospital is to care for the acutely ill, to accomplish research, and to provide an educational environment so that more physicians can gain the experience necessary to provide appropriate care for the sick and injured. There is little consideration of patients' concerns and anything else having to do with patient care.

We see corporate medicine disposing of hospitals based on their "margins of profit" and not on the needs of the community. The federal government has assumed the same emphasis: they are not as concerned about the care of the patient as about financial considerations. For example, current media headlines shout the news of new Medicare "denials of payments" for a variety of care that once was provided, such as various aspects of home health care. The number of such denials is rising, and the amount of money applied toward the accomplishment of the Medicare Program (that is, primarily providing care to the elderly) is being reduced at the same time the number of eligible Medicare beneficiaries is increasing by some 5,000 people per day.

It is clear that physicians must concentrate on quality and access to health care, because there is little doubt that unless physicians do, no one else will. Government programs are geared toward one purpose: the reduction of funds allocated to provide care, with little regard to the quality and the access of such care. They obviously believe physicians will continue to provide the same high quality they always have.

Members of the Faculty have an extremely important role within their community: to rekindle the "spirit" of the profession in the hearts and minds of physicians. This can be done as it once was by listening to patients and having **them** speak **for** the profession. It is clear to me that the Faculty and the profession have strengthened their position of concern throughout Maryland. The work of so many of our committees within the Faculty is ongoing, and the results of our actions are indeed fruitful.

One need only look back over the accomplishments and traditions set by our outstanding predecessors to find that we are in a very enviable position today, one of which we may all be proud. On behalf of all staff members of the Faculty it is our privilege and honor to serve this great profession of medicine and the decency for which it stands.

ANGELO J. TROISI
Executive Director

Finance

Mr. President and Members of the House of Delegates:

The Finance Committee met with representatives of the Bowman Financial Management Company, Inc. to review the performance of the Faculty portfolios. The Pension Fund increased 15.8 percent, the Steiner Fund increased 27.7 percent, and the Consolidated Fund increased 33.1 percent since the inception of Bowman Management in September 1985. The market value of the Consolidated Fund at December 31, 1986 was $1,352,580, and the Pension Fund was valued at $1,111,460. The advisors feel that the new tax reforms will have a major impact on investment management. The reform appears to favor Bowman's investment philosophy that emphasizes total return, the combined return from income and capital changes.

There are some negative forces underlying the economy and the strength of the stock market to take into consideration when analyzing the outlook for 1987. The bull market is 4½ years old, corporate earnings are expected to be sluggish, the economy is underperforming, energy prices may cause accelerated inflation, and

political uncertainties are casting doubts on the securities market. If excessive overvaluation develops, some profits may be taken and the proceeds held for reinvestment in a future price correction.

The Finance Committee was given by President Donald T. Lewers MD the charge of developing additional nondues income activities. Many possible sources of nondues income were discussed. An electronic claims filing system was approved by the Committee. The program was developed by Medical Payments System, Inc. (MPS) and American Medical Communications, Inc. (AMCom), a subsidiary of the AMA. MPS will enable physicians to file claims to third-party payers electronically, so that claims reporting will be easier, and payments will be received much faster. The Executive Committee approved the plan, and Med-Chi has entered into a contractual arrangement with AMCom and MPS. The Faculty will be responsible for advertising and promoting the program, providing training facilities and seminars, exhibiting at annual meetings, and other appropriate marketing support. A marketing plan is being developed for implementation as soon as possible. This service could benefit the Faculty substantially as a nondues income source while providing the members with an efficient, cost-effective claims payment system.

The Committee believes another for-profit organization, in addition to the Med-Chi Agency, should be established to allow profits to be earned without jeopardizing the tax exempt status of the Faculty. The recommendation of the Finance Committee was approved by the Executive Committee, and the new Management Services Corporation has been established.

JOSE M. YOSUICO **MD, Chairman**
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LEWIS H. DENNIS **MD**
ARTHUR T. KEEFE, Jr., **MD**
WILLIAM J. BANFIELD **MD**

Hospital Medical Staffs

Mr. President and Members of the House of Delegates:

The Committee on Hospital Medical Staffs met several times during the year. In the fall, the Committee sponsored an educational program explaining how to deal with alternative delivery systems. This spring, the Committee sponsored another educational meeting with Dr. Leonard Scherlis, Consultant to the United States House of Representative's Subcommittee on Health and Long Term Care, to discuss physician DRGs.

The Committee also continued to monitor the actions of the AMA's Hospital Medical Staff Section. In the year to come, the Committee hopes to find ways to become more responsive to the needs of hospital-based physicians.

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Complete **Information for Authors**
about submitting manuscripts
to the *Maryland Medical Journal*
will appear quarterly (SEP/DEC/MAR/JUN)
In the meantime, please refer to a back issue:
April 1987, p. 326
May 1987, p. 452

IPA Task Force

Mr. President and Members of the House of Delegates:

Following a resolution passed during the Semiannual Session of the House of Delegates on September 27, 1986, the Task Force on IPAs was formed and given the following charge:

> *Resolved*, That the Medical and Chirurgical Faculty of the State of Maryland become a member of and participate in a membership organization to inquire into and respond to the proposal by the Department of Defense to restructure the CHAMPUS Program, and other issues of common interest, and
> *Resolved*, That the Medical and Chirurgical Faculty begin an investigation into the feasibility of creating a statewide organization or network of physician IPAs capable of entering into contracts for the provision of health care on behalf of its physician members, and
> *Resolved*, That the Council shall have the authority to authorize expenditure of funds and the creation of such an organization should the investigation indicate that such an organization should be formed.

In an effort to answer this charge, members of the Task Force have considered a variety of options; each fell into the general category known as "managed-care programs." To assist the Task Force in investigating this increasingly complex area, the services of a managed-care expert and consultant were secured. With the assistance of this consultant, the Task Force identified an initial list of ten possible options.

Each option was reviewed and evaluated by the Task Force members according to a variety of criteria, including the level of financial risk involved, the projected expenditure of resources, the potential impact on the health care services and health care financing markets, the projected implementation time, and the level of educational value for Med-Chi members. As a result of this intense review, three final options were selected for consideration: an IPA, an IPO, or a management services company.

These three choices were included in a report that the IPA Task Force submitted to Council on March 19, 1987. After much discussion at both that and subsequent meetings, Council asked that further study take place on the issue. The IPA Task Force will reconvene for this purpose as soon as a new Chairman has been appointed.

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Legislative

Mr. President and Members of the House of Delegates:

The 1987 Maryland General Assembly was a very productive legislative session for the physicians of Maryland, under the guidance of the Legislative Committee Chairman, Israel H. Weiner MD. With the support of Governor William Donald Schaefer; Speaker of the House R. Clayton Mitchell, Jr.; and President of the Senate Thomas V. Mike Miller, Jr. many needed changes in the present law were effected. Other measures designed to erode the quality of health care in Maryland were defeated.

The following abbreviated account of major legislative issues considered by the Legislative Committee of the Medical and Chirurgical Faculty does not cover every piece of legislation tracked by the Legislative Committee but only those of significant statewide interest.

The Government Relations Office is staffed solely to answer and address the concerns of physicians through legislative action. Do not hesitate to contact Gerard E. Evans, Director of Government Relations, 1211 Cathedral Street, Baltimore, MD 21201, if you have any concerns or questions about how the office may assist you.

Senate Bill 239/HB 252 (both failed) would have eliminated the "collateral source rule" and required a judge in any civil action or an arbitration panel in a health care malpractice claim to reduce an award for personal injury or death by an amount that the court or panel determines to be the net amount paid or payable to a plaintiff from collateral sources. Under the current law, the "collateral source rule" prevents a trier of fact from considering, in a personal injury or wrongful death case, any benefits paid to a plaintiff as a result of the injury or death.

Under *Senate Bill 239/House Bill 252*, "collateral source" would have been defined to include a benefit, payment, reimbursement, or indemnification under federal or state disability acts or health, disability, or casualty insurance. Life insurance benefits, social security death benefits, workers' compensation benefits, and certain other benefits would have been excluded from consideration.

In addition, the plaintiff would have received a "credit" for any premiums paid to obtain the benefit from the collateral source.

After an award in a civil action or arbitration proceedings, the judge or the panel would have deducted from the award any amounts from collateral source benefits less any premiums paid to obtain those collateral source benefits.

House Bill 1593 (passed) was introduced late in the session as an alternative to House Bill 252, which failed earlier. It permits a modification or remittitur of damages in medical malpractice awards if the modification or remittitur is supported by the evidence.

Currently the "collateral source rule" prohibits the introduction of evidence that the plaintiff has received from other sources (for example, health insurance, disability insurance, or workers' compensation). However, existing law permits the modification of an award when the damages are inconsistent with the evidence.

This bill requires a health claims panel or the trier of fact in a medical malpractice proceeding to itemize damages for medical expenses, rehabilitation costs, and loss of earnings including any future expenses, costs, or losses.

This bill also authorizes a party to request that an award of damages be reduced to the extent that the plaintiff has been or will be paid under statute, insurance, or contract for the damages assessed.

The award may be modified if the modification is supported by the evidence including evidence of the costs to the plaintiff to obtain the payment from other sources.

The award may not be modified as to any sums paid or payable to the plaintiff under any workers' compensation act, employee benefit plan established under a collective bargaining agreement, life insurance policy, social security benefit program, and certain other programs. Damages assessed for any future expenses, costs, and losses may not be modified unless adequate security or insurance reserves are maintained to assure the payment of the plaintiff's future damages.

The bill prohibits subrogation for any sum included in the modification of an award, except as expressly provided by federal law.

This bill also allows the parties to a health care malpractice claim to mutually agree to waive arbitration and file suit immediately in a court.

Finally, the bill requires an insurer to submit an annual report to the Insurance Commissioner regarding its liability insurance experience in this state or other jurisdictions. The bill also creates a Tort and Insurance Reform Oversight Committee composed of Delegates and Senators from six committees to examine and evaluate the condition of the medical liability insurance structure in Maryland and the effect of this Act and other tort and insurance reform acts on that structure.

Senate Bill 225 (passed) lowers the age at which time the statute of limitations that applies to a medical malpractice claim for an injury to a minor begins to run. Under current law, an action for damages for an injury arising out of the rendering or failure to render professional services by a health care provider is required to be filed within five years of the time the injury was committed or within three years of the date the injury was discovered, whichever is shorter.

If the claimant was under 16 years of age at the time the injury was committed, the statute of limitations begins to run when the claimant reaches 16 years of age. Senate Bill 225 lowers from 16 years to 11 years the age at which the statute of limitations begins to run.

However, the age at which the statute of limitations commences remains at age 16 for an action for damages for an injury to the reproductive system of a claimant or an injury caused by a foreign object negligently left in the claimant's body.

Senate Bill 362/House Bill 461 (both passed) repeal a requirement that the jury commissioner of each county submit jury panel lists to the Health Claims Arbitration Office Director each term to be used for the random selection of persons from the general public to serve as arbitrators of health care malpractice claims. Senate Bill 362/HB 461 allow a jury commissioner or a clerk of a court to make jury panel lists available to the Director when requested by the Director.

House Bill 668 (passed) provides that a person who obtains, processes, stores, distributes, or uses human tissue, organs or bones, or any substance derived from those items for injection, transfusion, or transplantation may not be subject to a suit based on strict liability in tort or implied warranties of merchant ability or fitness under the Uniform Commercial Code. The current law provides protection only to blood used for injection, transfusion, or transportation.

HB 239, when passed by the House of Delegates, included a $2,500 fine per occurrence to be assessed against physicians for "overcharging." The fine was to be assessed by the Chairman of the Workers' Compensation Commission. After intense lobbying, the final bill passed by Senate and House Conference Committees had the fine completely stricken and maintained the integrity of the physician discipline mechanism. In fact, the bill as passed requires evidence of "a pattern" of practice of overcharging patients before a matter can be referred to the Commission on Medical Discipline. The passage of this legislation provides *no new* grounds for disciplining physicians.

HB 892 was introduced by Delegates Pinsky and Mackinnon and although the legislation was worded vaguely it was not unlike other measures introduced elsewhere that have led to either mandatory medicare assignment or denying physicians the right to "balance bill" their patients any charge in excess of the allowed medicare charge. The Faculty went to great time and effort to oppose this legislation, and it was defeated in Committee by a vote of 18–1. We were especially honored to have Dr. Annis, former President of the American Medical Association speak on our behalf at the hearing.

HB 612 (failed), known around the General Assembly as the 1987 "eye drops" bill, would have allowed an optometrist to administer topical ocular diagnostic pharmaceutical agents (eye drops) if the optometrist were certified to do so by the Board of Examiners of Optometry. To receive certification, the optometrist would have been required to complete certain educational requirements and a Board-approved course in

pharmacology that emphasized topical application of ocular diagnostic pharmaceutical agents and allergic reactions to them. This "eye drops" bill has failed in many previous sessions, but is perennially reintroduced.

The Faculty must be poised and ready to respond to a 1988 introduction of this same legislation. It is of paramount importance to defeat this legislation each time it is introduced. This is a premier "quality of health care issue," and it is strongly believed that no amount of oversight by the Board of Examiners of Optometry can replace the years of rigorous medical training received by the ophthalmologists and eye surgeons of Maryland.

SB 235 requires the Attorney General to assign a full-time Assistant Attorney General prosecutor to the Commission on Medical Discipline. Since the Commission on Medical Discipline is overworked and understaffed, this new position will greatly increase the quick, effective, and efficient resolution of medical discipline cases.

House Bill 1093 (passed) requires a physician to inform a patient of advantages, disadvantages, and risks associated with breast implantations before operating on the patient to insert a breast implant. The Department of Health and Mental Hygiene is required to develop a written summary in layman's language that contains information on breast implantation and discloses side effects and warnings about the procedure. This legislation will not go into effect until January 1, 1988 in order to give the Department of Health and Mental Hygiene time to prepare the summary.

Senate Bill 204/House Bill 566 (both passed) provide that a hospital administrator shall request the representatives of all individuals who die in a hospital to consent to donation of any or all of the decedent's organs or tissues if suitable. In addition, the bill expands the lists of representatives of a deceased patient who can consent to anatomical donation to include a son or daughter who is at least 18 years old. The bill also provides protection from civil and criminal liability for the hospital administrator and the representatives of the deceased patient. Since present law only requires that the representatives of deceased minor patients be asked to consent to anatomical donation, this bill could work to greatly increase the number of organs available for transplants.

The Governor's administration sponsored several bills that affected the organization of the Department of Health and Mental Hygiene. *Senate Bill 670* (passed) authorizes the Secretary of Health and Mental Hygiene to appoint three deputy secretaries in the Department of Health and Mental Hygiene instead of one deputy secretary as the law currently provides. The bill also eliminates the positions of assistant secretary for environmental programs and assistant secretary for mental health, addictions, and developmental disabilities. The proposed three new deputy secretaries will be for operations, for public health services, and for health care policy, financing, and regulations. The legislation also prospectively exempts from the state merit system certain program administrators in the Department of Health and Mental Hygiene.

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Liaison with the Department of Health and Mental Hygiene

Mr. President and Members of the House of Delegates:

The Committee continued its efforts to maintain a strong relationship with the Medical Assistance Program for Maryland. In this era of skyrocketing liability insurance premiums, the Committee carefully monitored reimbursement issues, particularly those involving obstetrical services.

Other areas of activity included vigorous discussions with the Department regarding specimen collection fees similar to that of Medicare, cost avoidance claim processing, and pediatrician attendance at high-risk deliveries. Many individual claims-specific problems involving Medicaid were resolved on behalf of Faculty members.

We are confident that this Committee provides an excellent method of addressing such concerns, and we appreciate the availability the Program's Physician Advisor and other key administrators who interact directly with our group.

As Chairman, I wish to extend my appreciation to each member of the Committee for their valuable time and experience in this area of Faculty work.

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Liaison with Third-Party Carriers

Mr. President and Members of the House of Delegates:

Major reimbursement issues impacted upon the medical profession in the last year. In October, Blue Cross/Blue Shield of Maryland notified physicians of its intent to apply the participating agreement to major medical and catastrophic major medical programs. This was seen as damaging to the private office-based practice of medicine, and consequent negotiations upheld the right of physicians to collect co-payments and deductables at the time of service. This issue remains actively on the Committee's agenda and work toward further improvements is certainly intended.

Another major issue was the implementation of the Maximum Allowable Actual Charge (MAAC) by Medicare and its impact upon physicians' practices. The confusing complexity of the regulations and the arbitrary fashion in which these regulations affect physician reimbursement were reviewed in depth. Additionally, the dissemination of misinformation by Medicare in Maryland of known erroneous and flawed MAAC profiles further confused, disheartened, and frustrated physicians attempting to deal with these new bureaucratic regulations. The plight of the physician newly in practice and the frustrations of attempting to provide appropriate patient care in this system were addressed with local Medicare officials.

In April 1987, a meeting was held with Congresswoman Helen Delich Bentley on the MAAC, and on other federal initiatives affecting physicians. Present at the meeting were several Faculty officers and staff, the Chairman of the Third-Party Liaison Committee, and representatives from the Maryland Society for Internal Medicine. At the termination of this more than four-hour meeting, it was the consensus of the physicians in attendance that Mrs. Bentley and her staff were sincerely interested and concerned with the problems discussed. Subsequent to this meeting, Mrs. Bentley has become a co-sponsor for House Concurrent Resolution 30 indicating her interest in resolving Medicare reimbursement problems.

As Chairman, I am pleased to express my appreciation to each member of the Committee, to representa-

tives of the Maryland Society for Internal Medicine, and the Maryland Academy of Family Physicians, and to Med-Chi's Director of Operations, for their commitment to this important Faculty activity.

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Library and History

Mr. President and Members of the House of Delegates:

The Faculty's library was successful in completing many of the goals planned for 1986–87. The library entered its second year of in-house computer applications producing bibliographies for Med-Chi's Annual Meeting and other meetings, catalogs, and mailing lists for the Chirurgical Bookshop; computerized billing of reference services; transmitting interlibrary loans; and maintaining periodical lists for hospital libraries. The library continues to improve cost recovery for services provided by users. The Librarian and Associate Librarian spent 12 days consulting with various hospitals regarding library services at their institutions. Contracts were maintained with three hospitals for long-term consulting services during this year. Finally, the operation of The Chirurgical Bookshop continues to generate income that supports the activities of the History of Medicine and the Rare Book Department.

Information and Reference Services

The number of Faculty members who used the services of the library in 1986–87 remained virtually the same over the previous year. During the past year 1,078 members of the Faculty used the library for either photocopying or computerized literature searching. This represents about 20 percent of the membership of the society.

The following table itemizes the volume of information and reference services for 1986–87:

Computerized literature searches	856
Photocopied articles	7,213
Items borrowed from other libraries	1,649
Items loaned to other libraries	1,382
Telephone reference questions	8,017

Income from photocopying and literature searching services has increased, allowing the library to decrease considerably the financial support provided by the Faculty. Last year income generated by library services covered 99.51 percent of the cost of these services to the library.

Eighteen institutions and five individuals maintained subscriptions to the Faculty Library's reference and information services during the past year. Subscription in this program generated $2,500 income.

Library Resources

The following table illustrates the growth of the library collection in the past year:

Books added	135
Journals bound	653
Total volumes added	788
Volumes withdrawn	24
Total volumes in collection	110,836

This is the second year of use of the in-house binding system. The advantage of keeping journals in house is apparent. The library is pleased with progress to date.

During the past year, Faculty members took part in our book purchasing program. As part of our technical processing services, books were ordered and processed and catalog sets provided for hospital libraries.

History of Medicine and Rare Books

In 1985–86, the History of Medicine and Rare Books Department responded to questions from 137 visitors. The staff logged 149 books out of the collection for the use of patrons and responded in writing to 64 questions.

The Chirurgical Bookshop which sells the library's duplicate volumes, issued two catalogs. Income from both sales totaled $6,465.

During the 1986 Annual Meeting of the Faculty, the exhibit's theme was "Home is Where the Library Is: A History of Med-Chi's Homes."

Significant progress was made in the aggregation and preliminary organization of the Faculty's archives, that is, Med-Chi's historic institutional records. Approximately 30 linear feet of archival material were processed and stored. Additionally, a portion of the portrait collection was moved into storage as renovation work continued in the building.

Staff Activities

Staff attended the Annual Meeting of the Medical Library Association in Minneapolis, MN in May 1986. The Librarian currently serves on the jury for awarding the association's Murray Gottlieb History of Medicine prize. He is on the Consulting Editors Panel of the association's *Bulletin of the Medical Library Association.* He is also the elected representative of the Medical Society Librarians' Section to the association's Section

Council. The Cataloging and Acquisitions Specialist was appointed Secretary/Treasurer of the Medical Society Section of the Medical Library Association for 1986–88.

Staff members also attended the Annual Meeting of the Medical Library Association's Mid-Atlantic Regional Chapter in Charlottesville, VA in November 1986. The Cataloging and Acquisitions Specialist was a member of the program committee for this meeting, and she moderated one of the sessions.

The Cataloging and Acquisitions Librarian served as President for the Maryland Association of Health Sciences Librarians during the past year.

The Reference and Circulation Librarian attended the Annual Meeting of the Special Libraries Association in Boston, MA in June 1986. She was appointed as SLA's representative to the Music Library Association, and in that capacity she attended the Music Library Association's annual meeting in Eugene, OR in February 1987. She also attended several meetings of the Special Library Association of the Baltimore Chapter.

The Collection Manager for the History of Medicine and Rare Book Collection attended the following meetings: Association for Librarians in the History of the Health Sciences and the American Association for the History of Medicine both in Rochester, NY; the American Institute for Conservation, Chicago, IL; and the National Archives Second Annual Conservation Conference, Washington, DC. She produced the Baltimore Area Conservation Group newsletter, *The Deckled Edge*, and wrote a regular conservation news column for its quarterly newsletter, *The Watermark*.

The entire library staff participated in the Faculty's Annual Meeting in April 1986. Bibliographies of recent articles were prepared and distributed by the library staff at each educational session of the meeting.

Plans for 1987–88

Building construction delays taxed the entire library staff during the past year: personnel were relocated and the construction seriously curtailed programs outlined for completion in this period.

Renovations of the library will be completed this coming year. This will involve the expansion and remodeling of the entire library. New heating and cooling systems are in operation. Staff will be working with the contractor in all phases of the project.

In this third year of the microcomputer era for the Faculty's Library, more programs will be added to improve efficiency of library operations. The focus will be automation of the library's book catalog.

Major efforts will be made to expand services of the library that can be sold to outside organizations and individuals. The intention is to maintain both the quality and quantity of medical library services available to Faculty members, and to increasingly finance these activities with incomes generated from the sale of these services to others.

Long-Term Care and Geriatrics

Mr. President and Members of the House of Delegates:

The Committee on Long-Term Care and Geriatrics met five times from September 1986 through May 1987, and the November 1986 issue of the *Maryland Medical Journal* was devoted to the aging population.

Because of the Committee's interest in the cost of pre-assessment reviews provided by the STEPS program (a service proposed by the Department of Health and Mental Hygiene in Cooperation with the Interagency Committee on Long Term Care), a meeting was held with the STEPS Coordinator as well as the Chief of the Long-Term Care Division of the Office on Aging. The Committee also met with the Aging Policy Coordinator from the Office of Policy Analysis and Program Evaluation of the DHMH with regard to medical assistance payment for general geriatric evaluations as well as an up-date on Gateway II.

In January the Committee met with the Chairperson of the Baltimore City Medical Society's Ad Hoc Committee on Home Health Agencies and the Staff Physician of the Local Health Administration to discuss the report of the Baltimore City Medical Society's Ad Hoc Committee on Home Health Care. Additionally, the Manager of Policy Research and Policy Analysis of the American College of Physicians was available to discuss his position paper, "Long-Term Care of the Elderly."

In March the Committee assembled at the Keswick Adult Day Care Center. Information on available services and a tour of the facility were provided by the Medical Director and the Director of the Day Care Center.

The Committee cosponsored a session at Med-Chi's Annual Meeting with the Maryland Orthopaedic Society pertaining to an Overview of Orthopaedics in 1987 with emphasis on geriatric and long-term care aspects.

In May the Committee sponsored the Ninth Annual Meeting of Medical Directors and Principal Physicians. Those in attendance were afforded an update from the Medical Director of the Delmarva Foundation for Medical Care, Inc., on its Medicaid contract as well as discharge issues relative to long-term care. The group also heard a legislative update from the Faculty's Government Relations Director, Gerard Evans, and representatives from the STEPS Program were again invited to present an update.

In closing, I extend my sincere appreciation to the members of this committee who have given their valuable time and services to these important issues.

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Maryland Medical Journal

Mr. President and Members of the House of Delegates:

This report covers the period August 1986 to August 1987, during which *MMJ* continued its excellent health and growth. While our national pharmaceutical advertising slumped in 1986 (along with about half the other state medical journals), *MMJ* remains in a financially stable position because of our excellent local advertising sales and the efforts of the Managing Editor to keep production costs under control. Editorial Board policy dictates that the ratio of advertising to text will be approximately 40 percent advertising to 60 percent text; this year the average number of advertising pages per issue was 47 percent. Waverly Press continues to provide satisfactory local printing and distribution services.

In October *MMJ* received a certificate of appreciation from the National Institutes of Health, National Heart, Lung and Blood Institute, signed by Dr. Claude Lenfant, Director. They commended us for over three years' publication of "HBP Commentary" (a column provided by the Maryland Commission on High Blood Pressure and Related Cardiovascular Risk Factors), which has "added greatly to their success in keeping Maryland physicians up-to-date on current topics in the detection and management of high blood pressure and issues involving other cardiovascular risk factors."

During the year three "dedicated" issues were published. Each concentrated on a particular topic; the usual departmental entries were suspended for that issue. All three issues proved very popular, and when we did not order extra copies on one issue, it was almost immediately out of print.

The November 1986 *MMJ*, Our Aging Population: Issues in Health Care, was compiled with the expert assistance of Michael A. Murray, Med-Chi's Director of Operations. In January 1986, the Center for Health Education in cooperation with Med-Chi's Ad Hoc Policy Advisory Committee on AIDS provided 17 articles, a list of community resources, and a clinical quiz to be completed and mailed in for CME credit. The theme was Sexually Transmitted Diseases: New Fronts in an Old Battle. The March 1987 issue, Impaired Professionals, planned and coordinated by Michael G. Hayes MD, Chairman of Med-Chi's Committee on Physician Rehabilitation and Robert K. White, Program Director of Med-Chi's Physician Rehabilitation Program, contained 13 articles and included a resource list for impaired professionals. For the first time, the April issue featured some of the speakers who addressed various scientific sessions at Med-Chi's Annual Meeting at the end of April.

The Public Relations Committee initiated a column, "Doctor to Doctor," in December 1986 with the goal of readers sharing their thought and experiences on physicians' understanding both the physical and psychosocial aspects of illness or wellness in order to better care for patients.

This year the *Maryland Medical Journal* established an award for authors of quality articles published in our journal during the previous calendar year. Awards will be given annually for the best writing from a practitioner and from a resident-in-training author.

From the 55 articles published in 1986, the Editorial Board selected one winning article in the practitioner category. Authors Robert J. Spence MD and Ernesto J. Ruas MD received an award for "The Banking and Clinical Use of Human Skin Allograft in Trauma Patients," which appeared in the March issue of the journal. Honorable mention went to Ali Daneshvar MD for his article in June 1986, "Autologous Transfusion: The Treatment of Choice," and to Glen W. Geelhoed for "Tumors and Humors: Current Status of the Immunology of Cancer," which appeared in the July issue.

The Editorial Board met three times during the past year to consider items that merited group discussion. Approximately 93 manuscripts were reviewed; 37 of these were solicited. The rejection rate for unsolicited articles was 30 percent. Issues average about 90 pages, and distribution of copies averages 7,100 a month.

Everyone associated with the production of the journal continues to welcome comments from Med-Chi members regarding any and all facets of the publication. As always, the rationale for any editorial decision will be shared with anyone having an interest in *MMJ*. The Editorial Board and the Managing Editor thank the many outside reviewers of manuscripts who so graciously donated their time and expertise in assisting the Editorial Board in this important function over the past year. We also appreciate the careful attention of individual department editors who monitor their columns for scientific accuracy and correct citations.

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LOUIS KOZLOFF **MD**
ANN WINTRISS, **Managing Editor**

Med-Chi Insurance Fund

Mr. President and Members of the House of Delegates:

In carrying out their responsibilities of monitoring sponsored insurance programs and serving as the Board of Directors of the Med-Chi Agency, the Directors met six times in 1986.

Richard F. Moschell MD died in 1986. He was a valuable asset on the Board, and we will miss his contributions in the meetings. George E. Linhardt, Jr., MD was appointed to the Board to fill the vacancy.

A new Personal Umbrella plan was approved to be offered to the membership. The coverage will be one million dollars, and the policy is not supported by other coverages. The premium is a flat amount.

There was a renewed effort to increase the number of student and resident clients during 1986. A new loan program for residents was installed and announced three times during the year. The Agency purchased an advertisement on the cover of the Residency Planning Seminar program and manned a booth during the seminar.

An attempt was made to provide a self-funded health benefits plan for the physician members. A consultant from the Johns Hopkins Institutions was engaged to pursue the project. To date, no insurance company is willing to provide the reinsurance required to allow the plan to work.

A new Major Medical plan of Blue Cross/Blue Shield was approved. This "stand alone" coverage is provided as another option for members who wish to deal solely with the Blue plans for their health coverage.

The benefits in the Hartford Plan were improved. Outpatient psychiatric benefits were increased from $35 to $50 per day. Also, the maximum limitation was increased from $2,000 to $4,000 per two year benefit period.

The Agency is the Franchised Broker for the Medical Mutual Liability Insurance Society in the Baltimore City and Baltimore County Metropolitan area. The franchise has resulted in a greater market penetration and higher earnings to the Agency.

The Med-Chi Agency enjoyed another financially successful year in 1986. Participation increased, and the profits will benefit the entire Faculty membership. Continued enthusiastic participation by the members will enable the Agency to provide the finest products and services for Maryland physicians.

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WILLIAM J. R. DUNSEATH **MD**
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GEORGE E. LINHARDT, Jr., **MD**
JOSE M. YOSUICO **MD**
JOSEPH J. HARRISON, **Secretary**

Medicine and Religion

Mr. President and Members of the House of Delegates:

The Medicine and Religion Committee met twice during the past year. Activities of the committee included the following:

a. Sponsoring a Prayer Breakfast at Med-Chi's 189th Annual Meeting, at which Robert C. Baumiller SJ, PhD gave a presentation.
b. Cosponsoring a session at Med-Chi's 189th Annual Meeting with the Committee on Professional Ethics entitled "Dilemmas in Terminal Care and the Right to Life."

LESLIE R. MILES, Jr., **MD, Chairman**
JOHN T. CRAIGHEAD **MD**
DAVID W. FRICKE **MD**
CRAIG G. HABER **MD**
THOMAS C. HILL **MD**
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GIBSON J. WELLS **MD**

Medicolegal

Mr. President and Members of the House of Delegates:

The Medicolegal Committee, sponsored jointly by the Medical and Chirurgical Faculty of the State of Maryland, the Maryland State Bar Association, and the Baltimore City Bar Association, has continued its work in bringing the medical and legal professions closer together. The Committee rendered advisory opinions and conducted binding arbitrations on complaints from either discipline. Again this year, the Committee organized a Medicolegal Hotline staffed by committee members for quick resolutions of simple disputes.

In addition, the Committee sponsored and presented a program at the January meeting of the Maryland Bar Association and the April meeting of the Faculty entitled "Emerging Ethical Conflicts Involving Medicine & Law." The panelists were distinguished and knowledgeable physicians, judges, and attorneys. The program was well received.

The Committee's Executive Board continues to meet between meetings of the Committee as a whole.

ARTHUR KAUFMAN **MD, Co-chairperson**
PATTI GILMAN ZIMMERMAN, **Esq., Co-Chairperson**
ROBERT W. BRIGHT **MD**
RAFAEL C. HACISKI **MD**
MURRAY F. HAMMERMAN **MD**
H. JACK HUDSON **MD**
ROBERT O. KAN **MD**
ALFRED L. LAPIN **MD**
NORMAN B. ROSEN **MD**
JOHN H. WEIGEL **MD**
ISRAEL H. WEINER **MD**
JEFFREY F. WITTE **MD**
AUGUSTUS F. BROWN, IV, **Esq**
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***PHILIP A. DALES, III,* Esq**
***BROUGHTON M. EARNEST,* Esq**
***WILLIAM H. ENGELMAN,* Esq**
***JOHN WHEELER GLENN,* Esq**
***BAYARD Z. HOCHBERG,* Esq**
***MAX R. ISRAELSON,* Esq**
***JEANETTE A. PLANTE,* Esq**
***VICTORIA SELPH,* Esq**
***JEFFREY A. SHANE,* Esq**

Membership

Mr. President and Members of the House of Delegates:

The Task Force on Membership, appointed in May 1986 by the President, has met regularly over the past year to take an overall look at membership and to prepare a membership plan for the Medical and Chirurgical Faculty of Maryland.

A preliminary membership plan has been developed and is being reviewed by component medical societies. The comments and suggestions of the component societies will be considered before a final plan is submitted to Council for approval at its September 1987 meeting. The preliminary plan summarizes current membership development efforts and establishes recruitment and retention goals, target groups, and objectives for the Faculty as well as methods of implementation and timetables.

The target groups selected by the Task Force include recently established physicians (ages 35 to 44), academic physicians, women physicians, foreign medical school graduates, and physicians unaffiliated with organized medicine at any level.

Some of the recommendations for retention programs include creating a member benefits issue of the *Maryland Medical Journal*, conducting a phonathon for renewals, offering a press release service for members, and giving community service awards to members. Recommendations for recruitment programs include hiring a full-time membership director, using the AMA Physician Outreach Project, throwing a pizza party for medical students, establishing component society welcome committees, and developing a Med-Chi brochure.

In concluding the preliminary draft, the Task Force suggested that a similar membership plan should be developed biennially. This Task Force will continue meeting until a final plan is approved by Council.

***THOMAS A. COLLIER* MD, Chairman**
***MORTON I. RAPOPORT* MD**
***ALBERT J. STRAUSS* MD**
***RONALD J. TAYLOR* MD**
***HENRY N. WAGNER* MD**
***DAVID P. ZAJANO* MD**

Nominations

Mr. President and Members of the House of Delegates:

For presentation to the House of Delegates, Wednesday, April 29, 1987. (Those elected will assume office at the conclusion of the Annual Meeting 1988, unless otherwise indicated.)

President-elect
Michael R. Dobridge, Silver Spring, Montgomery County (President-elect, 1987–88) (President, 1988–89)

First Vice-President
Marvin Schneider, Wheaton, Montgomery County (1988)

Second Vice-President
Hilary T. O'Herlihy, Glen Burnie, Anne Arundel County (1988)

Third Vice-President
J. Richard Lilly, Hyattsville, Prince Georges County (1988)

Secretary
Raymond M. Atkins, Baltimore, Baltimore City (1988)

Treasurer
Jose M. Yosuico, Laurel, Baltimore City (1988)

Committee on Scientific Activity (6-year term—1988–1994)
Victor R. Hrehorovich, Baltimore, Baltimore City

Finney Fund Committee (5-year term—1988–1993)
Herman C. Maganzini

Delegates to the AMA
Donald T. Lewers, Easton, Talbot County (January 1, 1988–December 31, 1990)
George S. Malouf, Hyattsville, Prince Georges County (January 1, 1988–December 31, 1990)

Alternate Delegates to the AMA
John H. Hebb, Baltimore, Baltimore County (January 1, 1988–December 31, 1990)
Henry N. Wagner, Jr., Baltimore, Baltimore City (January 1, 1988–December 31, 1990)
William E. Venanzi, Jr. (Student) (January 1, 1987–December 31, 1989)

Board of Medical Examiners (4-year term)
Chris Papadopoulos, Baltimore, Baltimore City (June 30, 1987–June 30, 1991)
Thomas M. Wilson, Bethesda, Montgomery County (June 30, 1987–June 30, 1991)

Nominating Committee

***J. D. DRINKARD* MD, Towson, Chairman**
***GARY L. ROSENBERG* MD, Baltimore**
Baltimore City District
***JOHN H. HEBB* MD, Baltimore**
Baltimore County District
***FRANCIS C. MAYLE* MD, Bethesda**
Montgomery County District
***J. RICHARD LILLY* MD, Hyattsville**
Prince Georges County District

WILLIAM J. BANFIELD MD, Easton
Eastern District
ARTHUR G. MANALO MD, Monrovia
Western District
DANIEL C. McCABE MD, Arnold
Southern District
DONALD H. DEMBO MD, Baltimore
Member-at-Large

Occupational Health

Mr. President and Members of the House of Delegates:

The Occupational Health Committee met five times during the 1986–1987 year to discuss areas related to occupational medicine.

Several members of the Committee met with the chairman of the Worker's Compensation Commission in March 1987 to discuss areas of concern, including delays in scheduling emergency hearings and scheduling of physicians' testimony. The Committee also met with Fredric Abramson MD, (chairman of the Governor's Commission to Study Worker's Compensation Laws in 1985) to discuss the report submitted to the Governor. The Commission's major areas of concern were the role of the plaintiff's attorney and medical cost control.

The Director of the Department of Occupational Medicine at Johns Hopkins Hospital attended a meeting to discuss establishing liaison with our committee.

In addition, the committee reviewed the Department of Public Safety and Correctional Services' policy requiring light-duty status for pregnant state police personnel, at their request; and sponsored a session at Med-Chi's annual meeting on thermography.

MICHAEL K. SPODAK MD, Chairman
TIMOTHY D. BAKER MD
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HERBERT L. BLUMENFELD MD
S. CHANARONG MD
PETER CHODOFF MD
JAMES FRENKIL MD
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ENRIQUE A. HERRERA MD
THOMAS E. HOBBINS MD
FERDINAND G. MAINOLFI MD
EMMANUEL M. MANIAGO MD
CHRISTIAN S. MASS MD
MICHAEL D. POTASH MD
JOSE G. PUIG MD
JAMES C. RICELY DO
NORMAN B. ROSEN MD
HENRY S. SABATIER MD
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JOSEPH A. THOMASINO MD
BORIS G. VLALUKIN MD
EDWIN W. WHITEFORD MD

Peer Review

Mr. President and Members of the House of Delegates:

The work of this Committee has intensified because of the attention given physician peer review by the State Legislature and the general public. As a result of Senate Bill 560, the volume of new cases being referred to us has increased tremendously. More site visits and personal interviews have been conducted than in the past. An informal review of Committee activities shows:

Cases referred directly from the Commission on Medical Discipline	52
Physicians interviewed	17
Site visits	24
Recommendations to the Commission on Medical Discipline	33
Final action by the Commission on Medical Discipline	16
Referrals from other sources	4

The Committee's work includes comprehensive and periodic reviews in many cases. The figures do not include those cases that the Commission refers to component societies or single patient complaints that are referred to another Med-Chi committee for resolution.

Because it is not feasible to have every specialty represented on the Committee, more and more specialty societies are being requested to assist in peer review. We are grateful for the dedication and cooperation of the specialty societies.

Members of this Committee have been faithful in attendance and have worked many personal hours in making site visits, reviewing medical records, and submitting written reports. The chairman expresses his gratitude to all Committee members, to Med-Chi staff for its able assistance in the administration of the Committee, and to the Commission on Medical Discipline.

EMIDIO A. BIANCO MD, Chairman
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Physician Assistants

Mr. President and Members of the House of Delegates:

This marks the second Annual Report of the Committee on Physician Assistants, which was established as a full standing committee of the Faculty House of Delegates in September 1985.

While the Committee has had several meetings, its primary activity was to review and monitor regulations growing out of the passage of Maryland Physician Assistant Act. The Committee maintains an excellent liaison with the Maryland Medical Board of Medical Examiners, which has legal authority under this act.

The Committee also reviewed issues regarding the utilization of operating room technicians in light of the fact that certified surgical physician's assistants perform identical responsibilities. Additionally, we were kept apprised of national issues including proposals for Medicare reimbursement for services provided by Physicians Assistants.

The Chairman thanks each representative on the Committee for this commitment and accomplishments.

BERNARD TABATZNIK **MD, Chairman**
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DULEEP J. PRADHAN **MD**
JIMMY B. ZACHARY **MD**
SHERRIE BORDEN **PA-C**
JAMES CAWLEY **PA-C**
JEAN GAFFNEY **PA-C**
JOHN McTIZIC **PA-C**
DONNA SEWELL **PA-C**

Physician/Patient Relations

Mr. President and Members of the House of Delegates:

The Physician/Patient Relations Committee continued its active schedule throughout the past year. As a result of Senate Bill 560, passed by the 1986 General Assembly, all complaints actionable under the Maryland Medical Practice Act are investigated under the auspices of the Commission on Medical Discipline. A major development growing out of this legislative initiative was the Commission's decision to refer cases filed with the Health Claims Arbitration Office for review under the Commission statute. I am pleased to report that the Committee vigorously accepted this difficult responsibility, and over the year investigated some 115 cases pending with or settled through the Health Claims Arbitration office. In matters where improper or questionable care was identified, appropriate recommendations for disciplinary action were made to the Commission.

The actual number of cases is apportioned as follows:

Total cases referred for investigation from the Commission on Medical Discipline	273
Grievances between physicians	11
Professional association designations reviewed	29

Aside from the above, the Committee and staff responded to innumerable inquiries regarding the practice of medicine and related issues. Raised by a variety of interests these questions range in complexity and always are answered thoroughly and appropriately. I am confident that this particular function is successful in fostering proper communication relative to the physician/patient relationship.

Finally, as Chairperson, I wish to express my sincere gratitude to each member of the Committee and to Mr. Murray for sacrificing time from family and practice to devote toward the betterment of the medical profession.

LOIS E. WEHREN **MD, Chairman**
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JAMES G. ZIMMERLY **MD**

Physician Rehabilitation

Mr. President and Members of the House of Delegates:

The Committee on Physician Rehabilitation has doubled its activity in 1986. The number of reports for 1985 was 36. In 1986 the number increased to 70. As of the end of 1986, the active caseload had increased to 137. The large increase in activity appears to be due to the addition of full-time paid staff and the related increase in promotional activities.

An Impaired Professionals Conference was held April 10, 1987 and was well attended (250). This first-time event brought together many different professionals who are involved with the treatment of impaired professionals. The media coverage generated by the conference was very positive.

The March 1987 *Maryland Medical Journal* was devoted to the topic of Impaired Professionals and contained many articles on related subjects. The reprints of this issue were in high demand, and, in fact, the supply was exhausted in two weeks. Fortunately, additional reprints were ordered and are being used for informational mailings.

Medical Mutual Liability Insurance Society agreed to contribute $25,000 toward the Physician Rehabilitation program for 1987. This represents an increase of $5,000 over last year's contribution. It also reflects a continuing commitment on the part of Med Mutual to

support this activity.

During the past year, the Committee has clarified its relationship with the Commission on Medical Discipline. The Commission is the final authority when a physician who obviously needs treatment for addiction or psychiatric illness refuses to comply with the Committee's requests. Fortunately, this occurs in only a small number of cases.

Committee members continue to serve as monitors of physicians in the program. This very time-consuming task would not be accomplished without their help.

The treatment loan fund has been quite active in 1986. Six loans were made to physicians totaling $12,420. The availability of the loan fund allowed these individuals to receive the highest quality treatment for their illness.

Finally, the Chairman wishes to announce that he will be withdrawing from the Chairmanship, but will remain active on the Committee.

MICHAEL G. HAYES **MD, Chairman**
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RICHARD H. ANDERSON **MD**
CHARLES BEATTIE **MD**
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MRS. HAZEL CHAMBERS
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MEENAKSHI A. NANDEDKAR **MD**
RONALD PETERSON
HECTOR RAMIREZ-HONEY **MD**
MAXWELL WEISMAN **MD**
ANDY BAER **MD**

Intervenor Subcommittee
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CHARLES BAGLEY **MD**
JOSEPH F. CHAMBERS **MD**
JOHN D. GRISWOLD **MD**
PAUL F. GUERIN **MD**
ROBERT R. KENT **MD**
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RICHARD MATTHEWS **MD**
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EDSON B. MOODY, **MD**
JOHN R. STEINBERG **MD**
EDWARD A. THOMPSON **MD**
MARTIN J. VALASKE **MD**
CHARLES L. WHITFIELD **MD**
MAURICIO ZEPLO **MD**

Preventive Medicine and Public Health

Mr. President and Members of the House of Delegates:

The Committee on Preventive Medicine and Public Health met twice during the 1986–1987 year. The following items were discussed and acted on by its Subcommittees:

1. The Subcommittee on Immunizations and Infectious Diseases has taken action on the following:
   a. Reviewed informational brochures, published by the Department of Health and Mental Hygiene, on the pertussis vaccine as well as citrobacter guidelines for hospital personnel.
   b. Investigated immunizations for children with AIDS, vaccine compensations, required immunizations for entry into Maryland schools, and prevention of Haemophilus influenzae Type B disease.
   c. Received the final report from the Governor's Task Force on AIDS.

2. The Subcommittee on Infant, Child, and Adolescent Health has
   a. Reviewed a draft outline for the Center for Health Education on teenage pregnancy.
   b. At the direction of the Executive Committee, reviewed the "Caring Program," a community service program by Blue Cross and Blue Shield.

3. The Subcommittee on Maternal Welfare has taken following actions:
   a. Continued a review of maternal deaths in the State of Maryland
   b. Reviewed the continuing problem with liability insurance for obstetrical services.

4. The Sports Medicine Subcommittee has acted on the following:
   a. Surveyed all state medical societies to find out if a sports medicine subcommittee exists and its charge.
   b. Invited guests from the Maryland Athletic Trainers Association and the Board of Physical Therapists to discuss licensure/certification requirements.
   c. Invited a representative from the Baltimore City Fire Department to discuss medical standby at high school athletic sporting events.

The Committee sponsored a scientific session at the Annual Meeting, "Indigent Care in Maryland."

Invited representatives from the Central Maryland Committee on Sickle Cell Anemia and the Association for Sickle Cell Services to discuss the services their agencies provide. It also reviewed and approved revisions to a MIEMSS brochure on seat belts for pregnant women.

ANNELIES S. ZACHARY **MD, Chairman**
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IDO ADAMO **MD**
ROBERT ANCONA **MD**
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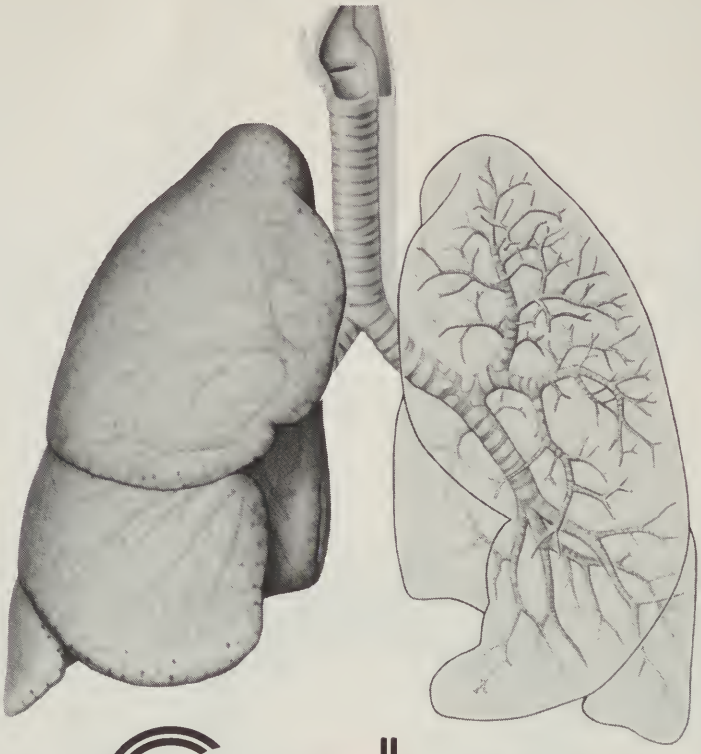
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Ceclor®
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250-mg Pulvules® t.i.d. offers effectiveness against the major causes of bacterial bronchitis

Haemophilus influenzae, Streptococcus pneumoniae
(ampicillin-susceptible and ampicillin-resistant)

Note: Ceclor is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

Ceclor® (cefaclor)

Summary. Consult the package literature for prescribing information.

Indications: Lower respiratory infections, including pneumonia, caused by susceptible strains of *Streptococcus pneumoniae, Haemophilus influenzae,* and *Streptococcus pyogenes* (group A β-hemolytic streptococci).

Contraindication:
Known allergy to cephalosporins.

Warnings:
CECLOR SHOULD BE ADMINISTERED CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS. PENICILLINS AND CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY. POSSIBLE REACTIONS INCLUDE ANAPHYLAXIS.

Administer cautiously to allergic patients.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

Precautions:
- Discontinue Ceclor in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of nonsusceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients.

Adverse Reactions: (percentage of patients)
Therapy-related adverse reactions are uncommon. Those reported include:
- Gastrointestinal (mostly diarrhea): 2.5%.
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, and serum-sickness-like reactions that have included erythema multiforme [rarely, Stevens-Johnson syndrome] or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever): 1.5%; usually subside within a few days after cessation of therapy. Serum-sickness-like reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Ceclor. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.
- Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.
- As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
- Rarely, reversible hyperactivity, nervousness, insomnia, confusion, hypertonia, dizziness, and somnolence have been reported.
- Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1%; and, rarely, thrombocytopenia.

Abnormalities in laboratory results of uncertain etiology
- Slight elevations in hepatic enzymes.
- Transient fluctuations in leukocyte count (especially in infants and children).
- Abnormal urinalysis; elevations in BUN or serum creatinine.
- Positive direct Coombs' test.
- False-positive tests for urinary glucose with Benedict's or Fehling's solution and Clinitest® tablets but not with Tes-Tape® (glucose enzymatic test strip, Lilly).

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ABRAHAM SCHNEIDMUHL MD
RUTH SINGER MD
ANDREW WILEY MD

Professional Ethics

Mr. President and Members of the House of Delegates:

The Committee on Professional Ethics continued to develop and revise opinions dealing with a variety of patient care issues. The Committee developed new opinions on Referrals and on Dissolution of Medical Practice. The Committee revised opinions dealing with Laboratory Referrals, Supervision of Lesser Trained Persons, Research Programs, Principles of Tissue and Organ Banking, and Advertising and Medical Staffs.

The Committee also cosponsored two educational programs at the Faculty's Annual Meeting in April: "Dilemmas In Terminal Care And The Right To Life" with the Committee on Medicine and Religion and "Emerging Ethical Conflicts Involving Medicine & Law" with the Medicolegal Committee. Both programs were well received.

LOUIS C. BRESCHI MD, Chairman
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PRO Monitoring

Mr. President and Members of the House of Delegates:

The PRO Monitoring Committee was established in 1985 as a result of a resolution passed by the Med-Chi House of Delegates. The resolution called for the Maryland Foundation for Health Care to restudy its criteria established in the PRO contract along with Maryland specialty societies and to revise criteria found to have potentially adverse effects on the quality of medical care. The PRO Monitoring Committee was formed to determine whether constraints imposed by the federal government were harmful to patients or simply inconvenient and a strain on the physician's income.

The Committee's attempt to carry out its charge included a request for complaints from physicians concerning patient care under the PRO regulations. Although this request was made several times, very few complaints were received from physicians. There appears to be no continuity of complaints nor any evidence that quality of care has been jeopardized.

To followup on this a meeting was held with the Medical Director of the Maryland Foundation for Health Care. He too reported that not many complaints had been received by the Foundation. It was determined that the Health Care Financing Administration (HCFA) was accepting proposals from several PRO organizations, and it was possible that the Maryland Foundation for Health Care would not receive the contract from HCFA. The Faculty has provided a letter of support to the Maryland Foundation for Health Care for inclusion in their proposal for the contract; however, it was determined that before additional action was taken, the Committee would await the decision of HCFA.

HCFA awarded the contract to the Delmarva Foundation for Health. A meeting has been scheduled for the upcoming year to discuss the PRO Monitoring Committee's goals and also to arrange a meeting with the Delmarva Foundation.

The Chairman wishes to thank members of the committee for giving their attention to this very difficult issue.

JOSEPH L. BERMAN MD, Chairman
AUGUSTO R. DeLEON MD
MICHAEL L. LEVIN MD
DAVID S. McHOLD MD
KARL F. MECH, Jr., MD
RICHARD T. SCHOLZ MD
JOHN A. SINGER MD

Public Relations

Mr. President and Members of the House of Delegates:

The Public Relations Committee was extremely active during the past year, dedicating much time working with Image Dynamics, a Baltimore based public relations/advertising firm, to develop a media campaign to enhance the image of physicians. The campaign proposal ultimately approved by the Executive Committee included billboards and radio spots with the theme "A Relationship For Life."

The campaign was launched as a one-month pilot project in Allegany, Garrett, and Washington counties in April 1987. Med-Chi members in those counties were

notified in advance of the pilot project and were asked to monitor their patients' reactions to the billboards and radio spots. Upon conclusion of the campaign, the same physicians were asked to complete a survey evaluating the effectiveness of the campaign. The survey responses are being reviewed, and if the overall response is positive, the campaign will be launched statewide.

In August 1986 the Faculty signed a one-year contract with WNTR-AM, 1050 mHz, in Rockville to air our radio talk show "Consultation." The program is broadcast every Saturday from 11:00 a.m. to 1:00 p.m. Program topics and speakers were coordinated in cooperation with the Montgomery County Medical Society and the Prince George's County Medical Society. Some topics covered on the program included AIDS, Dermatology, Nutrition, Organ Transplants, and Sports Medicine.

In September 1986 a letter was mailed to approximately 400 community organizations throughout Maryland announcing that Med-Chi can provide physician speakers on various medical topics. As a result, Med-Chi officers and members were busy speaking to groups such as The Knights of Columbus, Rotary Clubs, and Senior Citizen Guilds. The most frequently requested topics included the malpractice situation in Maryland, advantages and disadvantages of HMOs, and changes in Medicare.

The School #49 Reunion took place at the Meyerhoff Symphony Hall on Sunday afternoon, September 14, 1986. Nearly 2,000 Forty-niners, their spouses, teachers, and friends from all over the country attended the gala. Members of the Reunion Committee, under the leadership of Hilda Stevan, had been preparing for the event since October 1984.

On November 12, 1986 Susan Peterson, President of Susan Peterson Productions, conducted a dynamic speaker's workshop for medical society leadership. The workshop was designed to train physicians to speak before the public, legislators, and the media. Three physicians participated in this year's workshop and found the experience very valuable.

To better represent the views of our members, a Physician's Quick Response Network was developed to gather information and opinions from members on questions and issues on which the Faculty is considering taking a position. A registration form was inserted in the November issue of the *Maryland Medical Journal*, and over 200 Med-Chi members volunteered to participate. The network was especially useful during the legislative session.

Some other projects implemented this year included distributing health tips to area radio stations monthly, meetings with the Editorial Board of the Sunpapers, and development of a weekly in-house employee newsletter, *House Call*. In addition, the Faculty acted as a medical consultant to WJZ-TV's nightly news segment, "Check Up."

The Committee joined with the Ad Hoc Policy Advisory Committee on AIDS and sponsored a session at the Annual Meeting entitled AIDS: What Every Physician Should Know. The session provided attendees with knowledge of laboratory tests used to diagnose this killer disease as well as answers to questions commonly asked about AIDS as it relates to intravenous drug abuse, blood transfusions, pregnancy, and hospice care. The program moderator was Susan R. Guarnieri, MD, MPH, Commissioner of Health, Baltimore City Health Department. Panelists included Deborah Douglas MD, Joyce Harper MD, Michael Levin MD, Donald Pachuta MD, and Andrew Vernon MD.

The Second Annual Medical and Chirurgical Faculty of Maryland Media Awards Program for excellence in medical journalism was successfully implemented this year. The winners in four categories (daily newspapers; weekly, bi-weekly or semi-weekly newspapers; magazines and television) were awarded a plaque and a $1,000 cash donation to the medical charity of their choice at Med-Chi's Annual Meeting on April 29, 1987. Nine Citations of Merit were awarded to reporters in the print and television categories. Because the panel of judges agreed that none of the entries in the radio category represented excellence this year, no award was given.

Entries were judged by a panel representing the print and broadcast fields as well as three physicians, and were rated on the basis of medical accuracy, significance, quality, public interest, impact, depth of coverage, and journalistic style. The program is part of Med-Chi's efforts to expand contacts with the media and gain credibility as the resource for accurate health information in Maryland.

The Seventh Annual Photo Contest once again received active support with eleven Faculty and Auxiliary members entering a total of twenty nine photographs in the black-and-white and color categories. The judges this year were Thomas Wolfe, a free-lance photographer, and Dr. Joseph Whitley, a free-lance artist. Winners for 1987 were Mrs. Erma Hirschfeld, first place, color category; Laurence Rubin MD, first place, black-and-white category; and Andrew Munster MD, second place, color category. The winners were announced at the 1987 Annual Meeting, and were presented with gift certificates from the Dalsheimer Gallery. The photograph entitled "Big Ben," which placed second in the color category, was printed on the cover of the June 1987 issue of the *Maryland Medical Journal*.

The Council has approved a more ambitious public relations plan for 1987–88 that introduces a number of new objectives in addition to continuing those established this year.

JAMES E. BELL **MD, Chairman**
ELLIOTT M. BADDER **MD**
HABIB A. BHUTTA **MD**
WILLIAM A. CASSIDY **MD**
HOWARD B. COHEN **MD**
WILLIAM DVORINE **MD**
SHEILA EBENEZER **MD**

DAVID W. FRICKE MD
ROLAND FRIEDRICH MD
JOSEPH A. FORTUNA MD
JOHN W. FROST MD
ANTONIO GALINDO MD
GAY M. GUZINSKI MD
GUNTHER D. HIRSCH MD
ALFONSO H. JANOSKI MD
THOMAS W. JONES MD
ANTOINE E. KFURI MD
AHSAN S. KHAN MD
WILLIAM KORMAN MD
KEACIEL K. KRULEVITZ MD
FRED MAGAZINER DDS
MARCIO M. MENENDEZ MD
HIROSHI NAKAZAWA MD
BEN OTEYZA MD
EUGENE H. OWENS MD
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GARY W. PUSHKIN MD
GHOLAM R. SADJADI MD
ARTHUR W. SAGOSKIN MD
MAX G. SHERER MD
BERNARD R. SHOCHET MD
MARGARET T. SNOW MD
NEIL SOLOMON MD
PAUL T. WERTLAKE MD
MILDRED TAYLOR, Auxiliary
NINA C. CASEY, Director of Communications

Reference

Mr. President and Members of the House of Delegates:

The Reference Committee hereby submits the following resolution for your consideration:

Resolution 1S/87

Whereas, Maryland is a medically highly regulated state where costs of medical care compare favorably with the national average;
Whereas, The Delmarva Foundation for Medical Care has been awarded the PRO contract for Maryland for the next two years;
Whereas, the PRO contract has been distributed to providers (hospitals) allowing time for review;
Whereas, Review of this contract as well as review of additional information which as been distributed makes clear the fact that criteria for hospital utilization will become much more stringent; and
Whereas, This undoubtedly will continue to erode the quality of care as we know it and further destroy the art and compassion of the doctor-patient relationship; be it, therefore
Resolved, That the Medical and Chirurgical Faculty go on record as encouraging its members and, indeed, all of the physicians of Maryland, to maintain as their top priority the quality care of each individual patient, and that should there be a conflict between quality of care and regulations promulgated by the Delmarva PRO, quality care must always take precedence.

The Reference Committee recommends adoption of this resolution.

AUBREY C. SMOOT MD, Salisbury, Chairman
MAX E. BYRKIT MD, Williamsport
ZORAYDA LEE-LLACER MD, Clinton
GARY L. ROSENBERG MD, Baltimore
MARGARET T. SNOW MD, Silver Spring

Secretary

Mr. President and Members of the House of Delegates:

The 1987 Annual Meeting marked my first year as Secretary of the Faculty. It has been a year of great change for Med-Chi. During this period of transition it has been a distinct honor for me to serve as Secretary and to supervise the administrative tasks necessary to implement Faculty policies.

My primary responsibility as Secretary is to attest to the accuracy of the Executive Committee, Council, and House of Delegates minutes and to see that actions required by these bodies are implemented properly. Without the assistance of the dedicated administrative staff at the Faculty office, this would be an impossible job.

During the past year, the Council met approximately every other month, and the Executive Committee met on a monthly basis. At its May meeting, Council voted to hold future meetings on Saturdays in order to increase discussion time. For this same reason, the Executive Committee is considering beginning its meetings earlier in the day.

I wish to express my sincere appreciation to the members of the Faculty's committees, chairpersons, officers, and Councilors for their cooperation and support. It is the individuals who devote countless hours to Med-Chi meetings and functions that make this organization run smoothly.

I look forward with pleasure to serving the membership as Secretary in the coming year.

RAYMOND M. ATKINS MD
Secretary

Scientific Activity

Mr. President and Members of the House of Delegates:

Montreal and Quebec City, Canada were the locations of the 1986 Semiannual Meeting, held September 10–17. This marked the first time the meeting was held in a northeastern location in the autumn. Attendance was low, but the meeting was considered to be quite successful by the 116 attendees. The scientific sessions were rated very highly and featured speakers from

McGill University in Montreal, Laval University in Quebec, and our own experts from Maryland. A number of optional tours of the Canadian countryside were offered and thoroughly enjoyed by the participants.

The 1987 Annual Meeting was held at the Omni Hotel in downtown Baltimore, April 29-May 1. To increase the attendance in each scientific session, specialty societies were encouraged to collaborate to offer a topic of joint interest. This proved successful in almost every case.

It was a year of new activities. A media personality was invited to be the Keynote Speaker at the Plenary Session. George Will drew a crowd of 375 people on Wednesday afternoon for his talk, "Public Affairs, Public Policy, and the American Society." That evening, the Maryland Medical Political Action Committee invited the Capitol Steps to perform at a cabaret. This gifted group of political satirists provided an evening of hilarious entertainment for the 150+ physicians, legislators, and spouses who turned out for laughs, desserts, and specialty coffees.

A complimentary box lunch was served in the Exhibit Hall on Wednesday to all physicians and, on a limited basis, to all exhibit booths. This luncheon replaced the customary exhibitors' cocktail party held at the end of the first day in previous years. The purpose of the complimentary luncheon was to increase physician attendance in the Exhibit Hall and to encourage them to visit with the exhibitors. Most participants liked the concept, but there were complaints about the quality of the food.

The Prayer Breakfast, held at 7:15 a.m. on Thursday, attracted a crowd of 75 people, a better showing than in previous years. The announced speaker, Frank E. Young, MD, PhD, Commissioner of the Food and Drug Administration, had to cancel at the last minute, but was very satisfactorily replaced by Rev. Robert Baumiller, Professor of OB-GYN, at Georgetown University.

The Lunch-and-Learn Session, held on Thursday, was scaled down from 20 to 15 tables in an effort to find the right ratio of number of topics presented to number of people who wished to attend. The number appeared to be just right, as all seats were sold prior to the event, and very few people were turned away.

For reasons of fiscal responsibility the Past-Presidents' Dinner was not held this year. All past-presidents and their spouses/guests were given complimentary tickets to the Presidential Banquet instead. Nine past-presidents attended and were introduced from the Head Table. This format seemed to work well, as it gave continued recognition to those who have given of their time in the past to serve their colleagues.

The Presidential Banquet, honoring Donald T. Lewers MD, featured an excellent gourmet dinner, dancing to the music of the Zim Zemarel Big Band, and the exciting performance of singer/entertainer, Barbara Porteus.

Attendance at the Annual Meeting was approximately 1,100 physicians, a figure which has remained steady over the past several years. A difference this year was an increase in the number of member physicians attending and a comparable decrease in nonmember physician attendance. The decrease of nonmembers may be attributable to instituting a registration fee to nonmembers. Nonmembers were given the option of applying their registration fee to their first year's dues if they joined the society. Four new members were obtained.

The scientific sessions and the meeting in general were praised very highly by those who returned their evaluations forms. Almost all negative comments had to do with difficulty in finding parking places in the downtown area. Even though we offered complimentary parking in four garages, it was still difficult for some to find space in these garages. Another comment was a plea to return to Hunt Valley Inn. We are frequently in touch with Hunt Valley Inn seeking dates for the Annual Meeting. We simply do not use enough of their sleeping rooms to warrant the amount of meeting and exhibit space we require and, until this problem is solved, or unless Hunt Valley Inn management chooses to disregard the underutilization of sleeping rooms, we cannot hold the Annual Meeting at that facility.

The next Semiannual Scientific Meeting will be held in Hawaii (Maui, Waikiki, and San Francisco) in January 1988.

The 1988 Annual Meeting will be held April 27-29, at the Baltimore Convention Center.

Twenty-two requests from various organizations were approved for cosponsorship by the Faculty for Category I CME credits. Due to the considerable amount of staff time involved in processing cosponsorship requests, an application fee of $100 was instituted beginning January 1987.

The Committee on Scientific Activity very much appreciates the assistance given to make this a successful year and wishes to thank the many individuals who gave so willingly of their time and effort.

J. COURTLAND ROBINSON **MD, Chairman**
JOHN M. KRAGER **MD**
GARY L. ROSENBERG **MD**
JACK ZIMMERMAN **MD**
ERNEST HARMON **MD**
JOSE MARTINEZ **MD**
MRS MARY E. McGIBBON
Director of Meeting Services
MRS. RAE CARY, **Assistant Director**
Meeting Services

Look for *Med-Chi Meetings* schedule in each issue of *MMJ*.

Tel-Med

Mr. President and Members of the House of Delegates:

Maryland Tel-Med is part of a nationwide network of 350 telephone information programs throughout the United States, Canada, South America, and Saudi Arabia. Tel-Med, Inc., is a wholly owned subsidiary of the San Bernardino, California, County Medical Society. The Medical and Chirurgical Faculty is the Statewide Coordinator of six operating programs in Maryland. The Faculty helps new programs begin operation, reviews and develops scripts for the Maryland Master Library, and in cooperation with Blue Cross and Blue Shield of Maryland, assists in funding local programs

Program Activity

Maryland Tel-Med lost a unique Tel-Med program during the past year: Provident Hospital, the first Tel-Med program in the state, discontinued its service last fall when it merged with Lutheran Hospital and formed the new Liberty Medical Center.

Provident Hospital had been providing the free telephone information service to Baltimore since June 7, 1980 when former Mayor William Donald Schaefer placed the first call. Over the years, Provident Tel-Med maintained the highest call volumes in Maryland and was one of the most successful programs in the country.

New Tel-Med Logo

Med-Chi and Blue Cross and Blue Shield have developed a statewide logo and brochure design for all Maryland Tel-Med programs. The brochure cover looks similar to the 1986 Annual Report and is designed so that each program can insert its own information. The standard artwork and format will give Tel-Med a common identity throughout the state.

A Maryland Tel-Med poster is being developed with display pockets for each program to insert its own brochures. The combination will be ideal for doctors' offices, health departments, grocery stores, pharmacies, libraries, etc.

Five Maryland programs have updated their libraries and will be using the new brochure by fall 1987.

Idea Exchange

The Sixth Annual Tel-Med Idea Exchange is tentatively scheduled for the fall of 1987. The meeting will be hosted by one of the Maryland Tel-Med programs, and the agenda will include the following topics: use of the new statewide brochure as a marketing tool for Tel-Med, script development, Tel-Med tape ordering procedures, and other promotional techniques used by Maryland Tel-Med programs. Representatives from all six programs are expected to attend.

Cancer Information Services

The Cancer Information Service at the Johns Hopkins Oncology Center is one of seventeen such services throughout the nation established by the National Cancer Institute. The Cancer Information Service (CIS) provides the public with accurate and up-to-date information on cancer causes, prevention, early detection, treatment, rehabilitation, and referral to other cancer related agencies and services.

Maryland is the first state to use the Tel-Med program as a way to inform the public about CIS. Presently, many of the Maryland Tel-Med programs offer a tape, "Cancer Information Services," as well as several other cancer-related tapes that have been tagged with the toll-free number for the service.

Services to the Handicapped

Maryland Tel-Med includes twenty-six scripts from the Access-Info Library. Placement of the scripts is a cooperative effort with the office for the Coordination of Services to the Handicapped for the State of Maryland.

Maryland Master Library

In 1986–87 approximately seven new scripts were accepted into the Maryland Master Library; thirty-four were reviewed and reapproved.

Maryland *Tel-Med Newsletter*

Now in its eighth year of publication, the Maryland *Tel-Med Newsletter* continues to be the primary communication vehicle for the Tel-Med programs throughout the state. All programs are encouraged to submit information and ideas for inclusion in the newsletter. The newsletter is distributed quarterly to hospitals, medical societies, libraries, health departments, and specialty foundations.

Organization

The daily activities of Tel-Med including newsletter publication, script development and revision, and new program development are conducted by Nina Casey and Caroline Harman, staff members of the Medical and Chirurgical Faculty. Members of the Tel-Med Advisory Committee are responsible for major policy decisions. Members serving in the 1986–87 year include: C. Earl Hill MD; Ruth Mednick, Howard County Department Citizen Service; Elizabeth Duverlie, Maryland Hospital Education Institute; Carmine Valente, Center for Health Education; J. Roy Guyther MD, and Edward D. Layne MD.

All contributions to the Maryland Tel-Med program are received by the Medical and Chirurgical Faculty Charitable Fund, Inc., and are tax deductible. Inquires about the program should be directed to Maryland Tel-Med, 1211 Cathedral Street, Baltimore, MD 21201, or contact Nina Casey at 301-539-0872 or 1-800-492-1056.

Program Statistics

Location: Anne Arundel General Hospital, Annapolis
Date of Implementation: September 12, 1983
Funding Sources: Blue Cross and Blue Shield of Maryland; Annapolis Lions Club, Hospital Auxiliary
Call Volume: 417 calls/month
Community Services: Distribution of brochures to hospitals, schools, civic associations, the county health department, and at local health fairs. Tel-Med is included in the hospital Speakers Bureau. Tel-Med bookcovers distributed in area high school
Hours of Operation: 24 hours a day, 7 days a week
Tel-Med Number: 301-263-7755
Contact: Molly Kelifut, Manager, Public Relations 301-267-1480

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Location: Giant Food, Inc., Landover
Date of Implementation: February 15, 1984
Funding Sources: Self-funded
Call Volume: 4,000 calls/month
Community Services: Distribution of brochures in Giant Food Stores, and to area businesses; newspaper and radio advertisements
Hours of Operation: Monday thru Friday, 9 a.m. to 8 p.m.
Tel-Med Numbers: 341-8000—Washington Area (toll free)
995-8000—Baltimore Area (toll free)
Contact: Eileen Katz, Manager, Consumer Affairs 301-341-4365

• • •

Location: Memorial Hospital, Easton
Date of Implementation: March 26, 1981
Funding Sources: Blue Cross and Blue Shield of Maryland, Upper Shore Aging, Memorial Hospital Junior Auxiliary
Call Volume: 256 calls/month
Community Services: Part of Community Outreach Education Program; brochures distributed at public buildings, schools, churches, library, health department and local health fairs
Hours of Operation: 7 days a week, 8 a.m. to 11 p.m.
Tel-Med Number: 301-822-9198
Contact: Karen Myres, Director of Health Education Center 301-822-1000 (extension 5814)

• • •

Location: Peninsula General Hospital Medical Center, Salisbury
Date of Implementation: February 17, 1983
Funding Sources: Wicomico County Medical Society, Blue Cross and Blue Shield of Maryland, The Purnell Foundation, The Perdue Foundation, Mental Health Council
Call Volume: 139 calls/month
Community Services: Distribution of brochures to various community locations and to patients admitted to the hospital; articles in the hospital newsletter and advertisements in the local newspaper
Hours of Operation: Monday thru Friday, 5 p.m. to 10 p.m.
Tel-Med Number: 301-546-2857
Contact: Donna Richardson, Director of Development and Community Relations 301-543-7141.

• • •

Location: St. Mary's County Health Department, Leonardtown
Date of Implementation: March 1, 1984
Funding Source: Blue Cross and Blue Shield of Maryland (printed brochures), state and local funding
Call Volume: 250 calls/month
Community Services: Brochures distributed to public and parochial schools and local businesses, through the Family Services Program at the Naval Air Station, and included in the Health Department's "Wellness" project; radio public service announcements; speaking engagements with local businesses and civic and community organizations; immunization project in the St. Mary's County Hospital; McKay's Pharmacy provides monthly full-page newspaper advertisements
Hours of Operation: Monday, Tuesday, and Thursday, 8:30 a.m. to 8:30 p.m. Wednesday and Friday, 8:30 a.m. to 4:30 p.m.
Tel-Med Number: 301-862-4170
Contact: Mary Novotny, Tel-Med Coordinator 301-475-8921

• • •

Location: Washington County Hospital Association, Hagerstown
Date of Implementation: November 27, 1984
Funding Sources: Washington County Medical Society and Blue Cross and Blue Shield of Maryland
Call volume: 88 calls/month
Community Services: Distribution of brochures through Washington County Tourism Inc., as well as to churches, schools, banks, area businesses, local industries, and doctors' and dentists' offices; radio and television interviews; speaking engagements with local service groups and articles in the local newspaper
Hours of Operation: Monday thru Friday, 9 a.m. to 5 p.m.
Tel-Med Number: 301-790-8800
Contact: Myra Binau, Coordinator of Library Services 301-790-8801

We invite your comments as well as scientific articles. Write
Letters to the Editor and *Commentary*
MMJ, 1211 Cathedral St, Baltimore, MD 21201

Treasurer

Mr. President and Members of the House of Delegates:

The audited financial reports presenting the financial position of the Faculty as of December 31, 1986 and the results of the operations and changes in fund balances for the year are published in this issue of the *Maryland Medical Journal* in compliance with the Bylaws. The financial reports and records were audited by the Certified Public Accounting firm of O'Dea and Labrador. Their unqualified opinion is included in this report.

The 1987 Budget was approved by the Council in January. It is also included as part of this report.

***JOSE M. YOSUICO* MD**

O'Dea & Labrador
28 West Allegheny Avenue
Towson, Maryland 21204

Annapolis: 841-5471

Towson: 296-5880

The Medical and Chirurgical Faculty
of the State of Maryland
Baltimore, Maryland

We have examined the balance sheet of The Medical and Chirurgical Faculty of the State of Maryland as of December 31, 1986 and 1985 and the related statements of income, expenditures and transfers, and changes in fund balances for the years then ended. Our examinations were made in accordance with generally accepted auditing standards and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the financial statements referred to above present fairly the financial position of The Medical and Chirurgical Faculty of the State of Maryland as of December 31, 1986 and 1985 and the results of its operations and the changes in its fund balances for the years then ended, in conformity with generally accepted accounting principles applied on a consistent basis.

O'Dea & Labrador

July 17, 1987
Towson, Maryland

THE MEDICAL AND CHIRURGICAL FACULTY
OF THE STATE OF MARYLAND
Baltimore, Maryland

Exhibit A

BALANCE SHEET

ASSETS	General Fund	Endowment and Special Funds	Plant Fund	Med-Chi Insurance Fund	Total December 31,1986	Total December 31,1985
Current						
Cash	$3,224,072	$ 779,479	$ 15,309	$ 333,193	$ 4,352,053	$ 4,768,827
Accounts Receivable						
Membership dues, journal and advertising	65,247	-	-	-	65,247	110,163
Other funds	111,781	-	295,083	-	406,864	572,409
Other	137,464	-	-	15,000	152,464	199,022
The Med-Chi Agency, Inc.	129,167	-	-	-	129,167	9,734
Loans receivable - plant fund	-	-	-	-	-	36,842
Prepaid expenses	3,937	-	-	-	3,937	8,743
	3,671,668	779,479	310,392	348,193	5,109,732	5,705,740
Marketable securities	-	1,793,343	-	-	1,793,343	1,553,474
Investment - The Med-Chi Agency, Inc.	229,304	-	-	-	229,304	274,348
Fixed						
Land, buildings and improvements	-	-	2,617,801	-	2,617,801	1,570,224
Other	85,028	-	373,719	-	458,747	468,286
Other assets	899,000	177,147	-	-	1,076,147	1,069,469
	$4,885,000	$2,749,969	$3,301,912	$ 348,193	$11,285,074	$10,641,541
LIABILITIES AND FUND BALANCES						
Current						
Accounts Payable						
Trade	$ 16,855	$ -	$ -	$ 420,994	$ 437,849	$ 481,061
Other funds	295,083	66,130	-	45,651	406,864	572,409
Other	18,696	-	-	-	18,696	-
The Med-Chi Agency, Inc.	-	-	-	62,594	62,594	50,041
Component societies	732,108	-	-	-	732,108	731,565
Payroll taxes	4,884	-	-	-	4,884	4,323
Accrued expenses	58,062	-	-	-	58,062	52,114
Grants payable	77,508	-	-	-	77,508	77,508
Deferred income	767,234	-	310,392	-	1,077,626	891,657
Deferred compensation	-	373,109	-	-	373,109	349,571
Loans payable - general fund	-	-	-	-	-	36,842
	1,970,430	439,239	310,392	529,239	3,249,300	3,247,091
Fund Balances						
Invested in fixed assets	-	-	2,991,520	-	2,991,520	1,943,943
Designated						
Legal fund	92,245	-	-	-	92,245	92,245
Educational purpose	27,151	-	-	-	27,151	53,151
Other	4,214	-	-	-	4,214	5,493
Undesignated	2,790,960	2,310,730	-	(181,046)	4,920,644	5,299,618
	2,914,570	2,310,730	2,991,520	(181,046)	8,035,774	7,394,450
	$4,885,000	$2,749,969	$3,301,912	$ 348,193	$11,285,074	$10,641,541

The accompanying notes to financial statements are an integral part of this statement.

Exhibit B

THE MEOICAL ANO CHIRURGICAL FACULTY
OF THE STATE OF MARYLAND
Baltimora, Maryland

STATEMENT OF INCOME, EXPENDITURES ANO TRANSFERS
CENERAL FUNO (UNOESICNATEO)

	For Years Ended December 31, 1986	Oecember 31, 1985
Income		
Oues	$1,162,495	$1,156,192
Rents and services	20,731	12,852
Meetings	84,555	188,295
Journal advertising and subecriptions	134,076	173,551
Interest	154,978	193,127
Miscellaneous	186,659	153,816
Equity intereet in the Mad-Chi Agency, Inc.	204,956	149,716
	1,948,450	2,027,549
Expenditures		
Operating expenees	1,805,008	1,731,717
Exceee of incoma over expenditures	143,442	295,832
Transfers - Endowment and Special Funds		
From consolidated fund incoma	5,654	4,066
From special funds	-	23,322
From plant fund	-	135,622
	5,654	163,010
Excese of income and trsnsfers over expenditures	$ 149,096	$ 458,842

The accompanying notee to financial statements are an integral part of this etatement.

Exhibit C

THE MEOICAL ANO CHIRURCICAL FACULTY
OF THE STATE OF MARYLAND
Baltimore, Maryland

STATEMENT OF INCOME ANO EXPENDITURES
MED-CHI INSURANCE FUND

	For Years Ended December 31, 1986	December 31, 1985
Income		
Administrativa fees	$ 44,362	$ 90,922
Interest	81,925	158,076
	126,287	248,998
Expenditures		
Administrative servicas	32,295	26,400
Postage, printing and supplies	108	727
Rent	960	1,050
Telephona	200	500
Professional faes	750	990
Contributions	905,000	500,000
	939,313	529,667
Excess (Deficit) of income ovar expenditures	$(813,026)	$(280,669)

The accompanying notee to financial atatemants are an integral part of this statament.

NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 1986

Nota 1 - Summary of Significant Accounting Policies

The Medical and Chirurgical Faculty of the State of Maryland is a nonprofit organization, tax exempt under Section 501 of the Internal Revenue Code.

Marketable securities are carried at cost. Market values at Oecember 31, 1986 and 1985 were $2,211,167 and $1,995,207, respectively.

The Faculty carriee its investment in the 100% owned The Med-Chi Agency, Inc. at equity. The net assets of the corporation as of Oecember 31, 1986 and 1985 were ae follows:

	1986	1985
Current aeeeta	$420,459	$411,016
Fixed aeeete - net	5,229	7,456
	425,688	418,472
Current liabilitiee	196,384	144,124
	$229,304	$274,348

Fixed aesete of the plant fund, other than personal property, are recorded at coet. Portraite were appraieed as of Oacembar 31, 1963 at $65,000, an increase of $51,000 ovar prior yaare. All othar personal property wae appraieed ae of December 31, 1949. Depreciation on fixed assete is not provided. A echedule of fixed assets follows:

	1986	1985
Real Estate		
1209-1215 Cathedral Street		
Land and building	$ 110,636	$ 110,636
Improvemente	347,014	347,014
1205-1207 Cathedral Street and 1204 Maryland Avenue		
Land and buildinge	1,997,215	949,639
Improvemente	162,936	162,936
	2,617,801	1,570,225
Other		
Library booke, journale	231,370	231,370
Office and library - fixturee, antiquee and mueeum piecee	77,349	77,349
Portraite - appraieed valua	65,000	65,000
	373,719	373,719
	$2,991,520	$1,943,944

Fixed assets of the general fund are recorded at cost and depreciated using the straight-line method over their estimated useful lives for assets acquired prior to 1981 and using the accelerated cost recovery system for assets acquired after 1980.

	Oecember 31, 1986	December 31, 1985	Life in Years
Auto aquipment	$ 15,700	$ 9,796	3
Office aquipment	271,325	251,998	5-10
Total coat	287,025	261,794	
Less - accumulated depreciation	201,997	167,227	
	$ 85,028	$ 94,567	

Provision for depreciation charged to operations for the years anded Oecember 31, 1986 and 1985 wae $44,567 and $34,284, respectively.

Note 2 - Pension Plan

Tha Faculty hae a noncontributory pension plan covering substantially all its employees. Pension contributione for the current year and prior year were $55,289 and $52,114, respectively, which includee amortization of prior service cost over 20 years. The Faculty's policy is to fund pension costs accrued. Actuarial determined pension costs ara funded on an annual basis by tha Frozen Initial Liability mathod with initial accrued liabilities computed under the Entry Age Normal Coet method. A comparison of accumulated plan benefits and plan nat aeeets for tha Faculty is presented below:

	1986	1985
Actuarial Present Value of Accumulated Plan Benefits		
Vestad	$ 610,895	$ 835,752
Nonvestad	365,501	96,948
	$ 976,396	$ 932,700
Net asaets available for benafits	$1,295,590	$1,134,170

The assumed rate of return used in determining the actuarial present value of accumulated plan benefits was 6.5% for both 1985 and 1984. The fund'e assets ae of April 1, 1985 and April 1, 1984 exceeded the vested benefits by $684,695 and $298,418, respectively.

THE MEDICAL AND CHIRURGICAL FACULTY
OF THE STATE OF MARYLAND
Baltimore, Maryland

Exhibit D

STATEMENT OF CHANGES IN FUND BALANCES

FOR YEAR ENDED DECEMBER 31, 1986

	Balance January 1, 1986	Additions: Excess of Income over Expenditures and Transfers	Additions: Investment Income	Additions: Interest on Savings Accounts	Additions: Plant Fund Assessments of Members	Additions: Other Income and Contributions Received	Additions: Gain on Sale of Securities	Deductions: Transfers In (Out)	Deductions: Expenditures	Balance December 31, 1986
General Fund										
Designated	$ 150,889	$ -	$ -	$ -	$ -	$ 28,183	$ -	$ -	$ 55,462	$ 123,610
Undesignated	2,641,864	149,096	-	-	-	-	-	-	-	2,790,960
Endowment and Special Funds	2,025,774	-	103,209	16,236	-	6,424	239,869	(5,654)	75,128	2,310,730
Plant Fund	1,943,943	-	-	4,504	-	1,043,073	-	-	-	2,991,520
Med-Chi Insurance Fund	631,980	(813,026)	-	-	-	-	-	-	-	(181,046)
	$7,394,450	$(663,930)	$ 103,209	$ 20,740	$ -	$1,077,680	$ 239,869	$ (5,654)	$130,590	$8,035,774

FOR YEAR ENDED DECEMBER 31, 1985

	Balance January 1, 1986	Additions: Excess of Income Over Expenditures and Transfers	Additions: Investment Income	Additions: Interest on Savings Accounts	Additions: Plant Fund Assessments of Members	Additions: Other Income and Contributions Received	Additions: Gain on Sale of Securities	Deductions: Transfers In (Out)	Deductions: Expenditures	Balance December 31, 1985
General Fund										
Designated	$ 118,701	$ -	$ -	$ -	$ -	$ 32,188	$ -	$ -	$ -	$ 150,889
Undesignated	2,183,022	458,842	-	-	-	-	-	-	-	2,641,864
Endowment and Special Funds	1,832,307	-	137,184	25,964	-	32,003	113,693	(4,066)	111,311	2,025,774
Plant Fund	1,504,395	-	-	20,008	-	555,162	-	(135,622)	-	1,943,943
Med-Chi Insurance Fund	912,649	(280,669)	-	-	-	-	-	-	-	631,980
	$6,551,074	$ 178,173	$ 137,184	$ 45,972	$ -	$ 619,353	$ 113,693	$(139,688)	$111,311	$7,394,450

The accompanying notes to financial statements are an integral part of this statement.

Note 3 - Related Parties

The Medical and Chirurgical Faculty of the State of Maryland owns the stock of the Med-Chi Agency, Inc. The Faculty leases office space to the Agency under a month-to-month lease. Lease payments from the Agency were $10,320 and $9,396 for 1986 and 1985, respectively. Additionally, the Faculty performed certain management and accounting services for the Agency; income for these services was $95,000 in 1985 and 1984.

Note 4 - Other Assets

The Faculty has deposits in several savings and loan associations under control of the Maryland Deposit Insurance Fund (MDIF). Availability of these funds is controlled by the state agency and the funds are not considered current for this fiscal period.

Proposed Budget 1987: Estimated Income

	Budget 1986	Projected Actual Thru 1986	Budget 1987
Membership Dues	$1,165,000	$1,165,000	$1,170,000
Investment Income	310,000	350,000	350,000
Maryland Medical Journal	185,000	160,000	170,000
Annual & Semiannual Meetings	25,000	86,000	70,000
Administrative Services	100,000	100,000	110,000
Other Income	35,000	40,000	40,000
Total	$1,820,000	$1,901,000	$1,910,000

Proposed Budget 1987: Estimated Expenditures

	Budget 1986	Projected Actual Thru 1986	Budget 1987
Auditing	$7,200	$6,500	$7,200
Legal	5,000	5,000	7,000
Contributions	1,000	750	1,000*A
Gas, Electricity & Water	25,000	28,618	32,000
Telephone & Telegraph	30,000	33,926	34,000
Postage	55,000	46,843	55,000
Household & Janitorial	10,000	7,160	14,000
Property Maintenance	10,000	9,716	12,000
Insurance	14,000	12,000	14,000
Special Equipment Services	2,000	—	—
New Equipment	15,000	12,860	15,000
Equipment Maintenance	2,000	1,173	2,000
Stationery & Supplies	18,000	19,104	21,000
Salaries	852,000	852,637	916,000
Social Security	58,000	58,650	61,000
Unemployment Compensation	10,000	8,000	10,000
Employees' Insurance Program	58,000	58,891	62,000
Employees' Pension	70,000	70,000	70,000
Supplementary Hours	6,000	8,116	9,000
Travel	85,000	70,799	80,000*B
Printing	27,000	26,974	29,000*C
Data Processing	18,000	19,915	21,000
Governmental Relations	65,000	64,673	40,000*D
Library	20,000	20,000	20,000*E
Maryland Medical Journal	185,000	148,000	160,000
Annual & Semiannual Meetings	70,000	126,566	100,000*F
Presidential Fund	10,000	10,000	10,000
Auxiliary	1,000	1,000	1,000
Miscellaneous	30,000	45,697	35,000
Depreciation	48,000	48,000	48,000
Public Image Campaign	—	—	65,000*G
Total	$1,807,200	$1,821,574	$1,951,200

A. Contributions: Reflects reserve for possible requests during the year

B. Travel: Includes attendance at following meetings:
Professional Convention Management Association, January (one staff member).
Regional Legislative Conference, January (two staff members)
National Medical Leadership Conference, Chicago; President, President-elect, Council Chairman, two staff members, February 20–22
Six Delegates, Six Alternates, President, President-elect and staff to attend
1. AMA Annual Meeting, Chicago–June
2. AMA Interim Meeting, Atlanta–December
Medical Society Executive Conference, in conjunction with above (three staff members)
American Society of Association Executives, Annual Meeting or similar education activity
AAMSE (American Association of Medical Society Executives) (two staff members)
Travel throughout the state for various component society meetings, other business and activities, as well as out of state regional and national sessions as determined on an individual basis

C. Printing: Includes the publication cost of membership directory

D. Governmental Relations: Includes nurses' salaries and supplies for First Aid Room, office, publications printing, mailing costs, and travel

E. Library: Includes Memberships, Travel, Supplies, Equipment, Xeroxing, Postage and Miscellaneous Library expenditures. Library books, binding, etc. are purchased by designated funds and are not included

F. Annual & Semiannual Meeting: New expenditures items of over $5,000 for these meetings (exclusive of pass-through items) to be approved by Executive Committee or Council. Arrangements and costs for Presidential Banquet and other social events, to be cleared by Executive Committee

G. Public Image Campaign: Program approved by Executive Committee, December 1986

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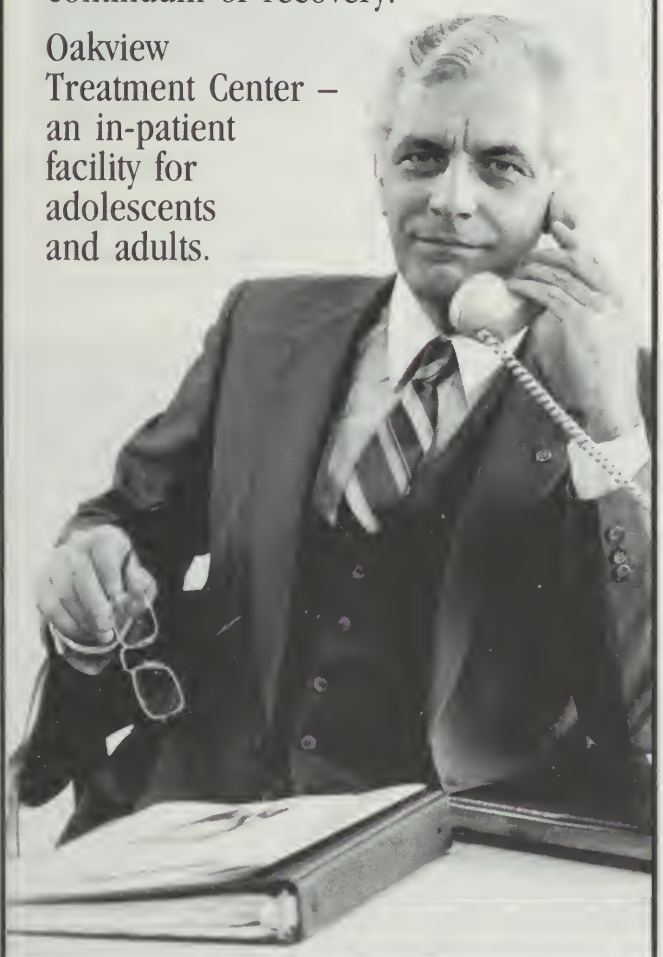
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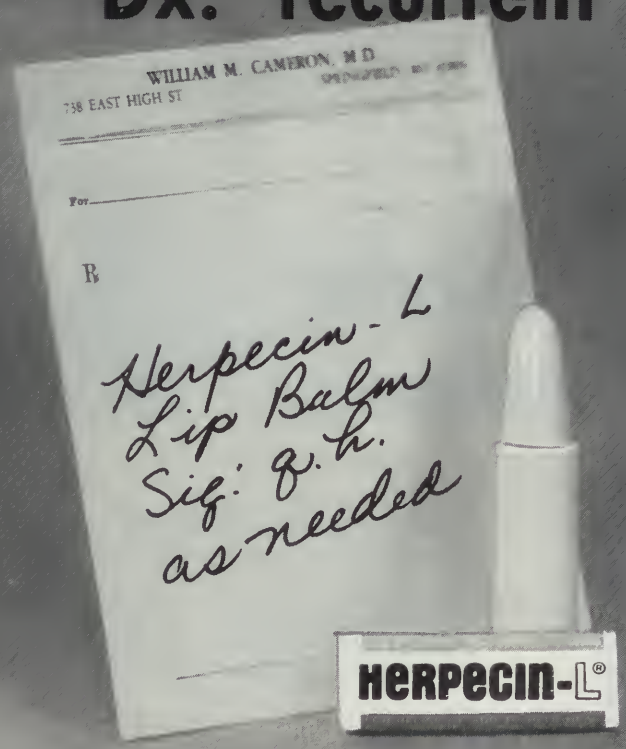
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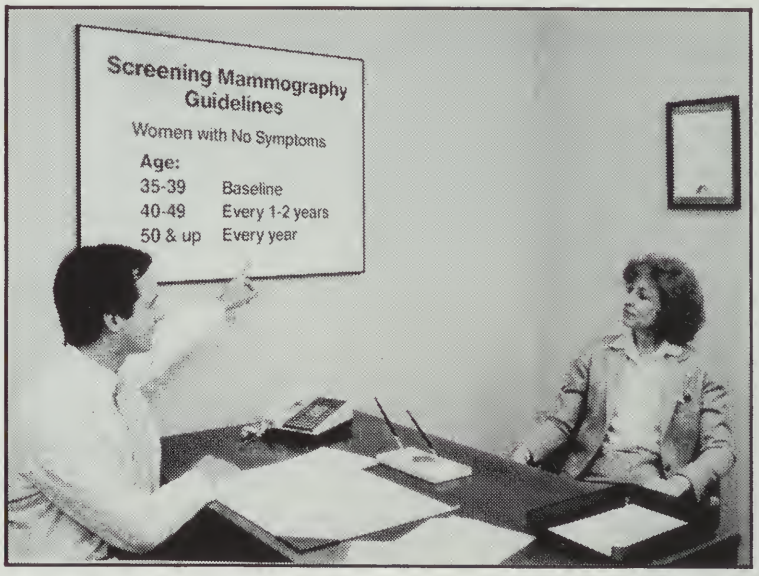
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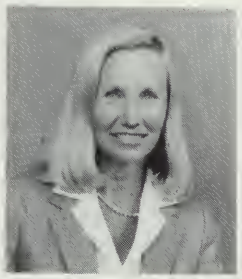
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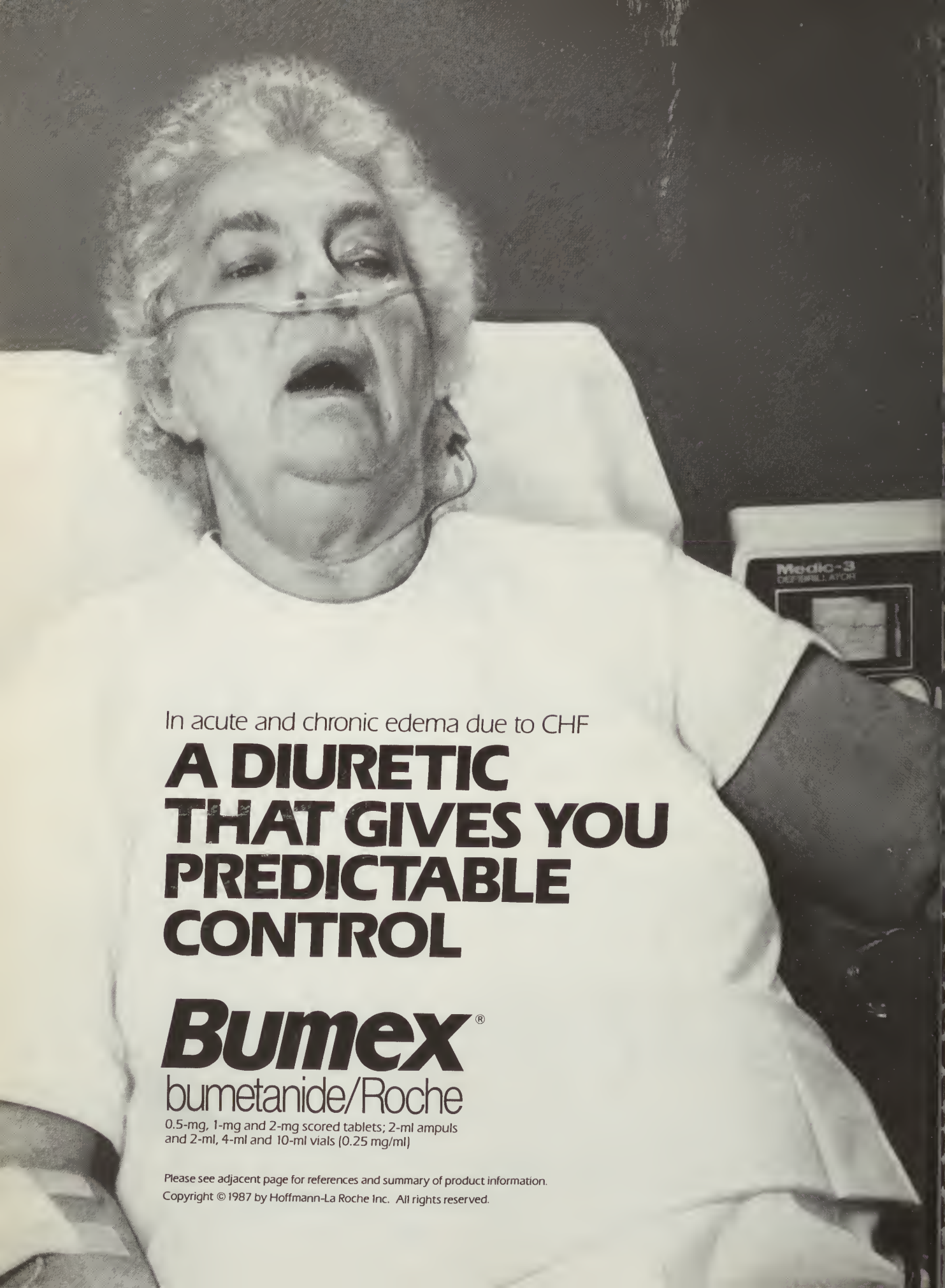
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Prevention of hypokalemia requires particular attention in patients receiving digitalis and diuretics for congestive heart failure, hepatic cirrhosis and ascites, states of aldosterone excess with normal renal function, potassium-losing nephropathy, certain diarrheal states, or other states where hypokalemia is thought to represent particular added risk to the patients.
In patients with hepatic cirrhosis and ascites, sudden alterations of electrolyte balance may precipitate hepatic encephalopathy and coma. Treatment in such patients is best initiated in the hospital with small doses and careful monitoring of the patient's clinical status and electrolyte balance. Supplemental potassium and/or spironolactone may prevent hypokalemia and metabolic alkalosis in these patients.
In cats, dogs and guinea pigs, Bumex has been shown to produce ototoxicity. Since Bumex is about 40 to 60 times as potent as furosemide, it is anticipated that blood levels necessary to produce ototoxicity will rarely be achieved. The potential for ototoxicity increases with intravenous therapy, especially at high doses.
Patients allergic to sulfonamides may show hypersensitivity to Bumex.
PRECAUTIONS: Measure serum potassium periodically and add potassium supplements or potassium-sparing diuretics, if necessary. Periodic determinations of other electrolytes are advised in patients treated with high doses or for prolonged periods, particularly in those on low salt diets.
Hyperuricemia may occur. Reversible elevations of the BUN and creatinine may occur, especially with dehydration and in patients with renal insufficiency. Bumex may increase urinary calcium excretion.
Possibility of effect on glucose metabolism exists. Periodic determinations of blood sugar should be done, particularly in patients with diabetes or suspected latent diabetes.
Patients should be observed regularly for possible occurrence of blood dyscrasias, liver damage or idiosyncratic reactions.
Especially in presence of impaired renal function, use of parenterally administered Bumex should be avoided in patients to whom aminoglycoside antibiotics are also being given, except in life-threatening conditions.
Drugs with nephrotoxic potential and bumetanide should not be administered simultaneously.
Since lithium reduces renal clearance and adds a high risk of lithium toxicity, it should not be given with diuretics.
Probenecid should not be administered concurrently with Bumex.
Concurrent therapy with indomethacin not recommended.
Bumex may potentiate the effects of antihypertensive drugs, necessitating reduction in dosage.
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Pregnancy: Bumex should be given to a pregnant woman only if the potential benefit justifies the potential risk to the fetus.
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Pediatric Use: Safety and effectiveness below age 18 not established.
ADVERSE REACTIONS: Muscle cramps, dizziness, hypotension, headache and nausea, and encephalopathy (in patients with preexisting liver disease).
Less frequent clinical adverse reactions are weakness, impaired hearing, rash, pruritus, hives, electrocardiogram changes, abdominal pain, arthritic pain, musculoskeletal pain and vomiting.
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Heart Transplantation:
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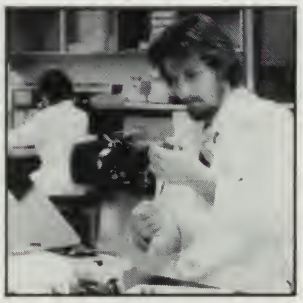
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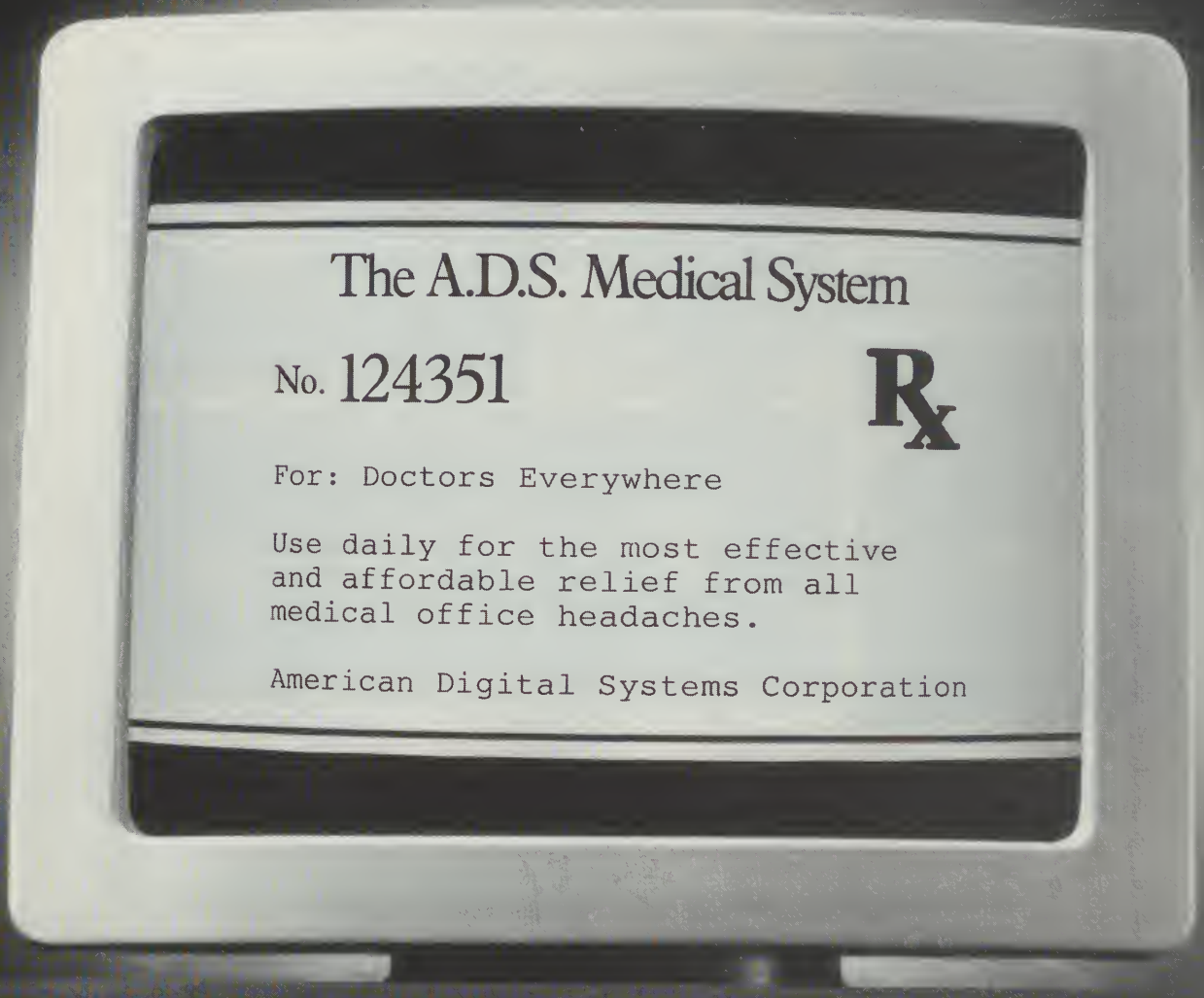
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Significant advances have occurred in heart transplantation over the past five years. The Hopkins experience is reported beginning on page 751. *Cover* illustration by Michael Hill.

The views in this publication are those of the authors and do not necessarily reflect the opinion of the Medical and Chirurgical Faculty of the State of Maryland.

MR UPDATE

MRI is Rapidly Replacing CT & Myelography For Evaluation of HNP

LUMBAR SPINE



HISTORY: This 38-year-old male complained of recent onset of low back pain radiating to left lower extremity.

SCAN: This midline sagittal image demonstrates the high intensity (white) discs lying between the vertebral bodies. The L4-5 disc is herniated posteriorly with a "mushroom configuration" (long arrow). CSF in the spinal canal is gray (short arrow), and this CSF column is indented by the herniated disc material at the L4-5 level (long arrow). Axial images at the other levels demonstrated that the high intensity disc material is contained, and disc herniation can be confidently excluded at all the other levels.

MRI HIGHLIGHTS: Lumbar and cervical surface coil MRI is rapidly replacing myelography and computerized tomography for initial evaluation of suspected disc herniation and suspected spinal stenosis. Standard MR examination shows the entire lumbar or cervical spine, the spinal canal and the paraspinal region. Causes of low back or neck pain and sciatica are well demonstrated without injection of contrast material and without ionizing radiation. The bony structures are well shown, and destructive bony lesions and extraosseous extension of bony lesions are routinely demonstrated on MRI. Intraspinal neoplasms are also confidently detectable.

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Office of Disease Control and Epidemiology Newsletter
PREVENTIVE MEDICINE ADMINISTRATION
MARYLAND DEPARTMENT OF HEALTH AND MENTAL HYGIENE

201 W. PRESTON STREET/BALTIMORE, MARYLAND 21201/(301) 383-2644

SEPTEMBER 1987

REVISED CENTERS FOR DISEASE CONTROL (CDC) AIDS CASE DEFINITION

PURPOSE:

The objective of the revision is to more accurately depict the scope and impact of the AIDS epidemic in the United States, by including AIDS cases that previously would not have met the definition criteria. This revision includes opportunistic diseases which previously did not meet the criteria for inclusion (listed in part 1.2, next page). Also of importance is the inclusion of HIV encephalopathy and HIV wasting syndrome on the list of indicator diseases. Also of note: in the past, if other possible causes of immunodeficiency were present regardless of HIV antibody status, the case was excluded. Now, if a positive HIV antibody test is present, the case will not be excluded.

TIME FRAME:

The revised case defintion has been published in the August 14, 1987 Morbidity and Mortality Weekly Report Supplement. It is expected to be implemented nationally on September 1, 1987, or after the national computer systems handling the data are modified. In Maryland, the new case definition of AIDS is considered to be a reportable disease under the Code of Maryland Regulations 10.06.01.02(i). This Update will begin to reflect the revised definition in the September Update, in an attempt to stay on par with the national statistics.

IMPACT:

The CDC has estimated an increase of 10-15% in the number of reported AIDS cases nationally, due to the revised defintion. In Maryland, the expected increase in reported cases is estimated to be 20-30%.

If you wish to receive a more complete version of the revised definition or if you have questions regarding the changes, call Cyrus Hamidi, M.P.H., Epidemiologist, AIDS Administration, (301)-225-6707.

DEFINITION:

1.0 For reporting purposes, a case of AIDS is defined by the diagnosis of one or more of the following opportunistic "indicative" diseases.

1.1 The following indicative diseases do not require an HIV antibody test to meet the criteria for the AIDS case definition:

1.11 **CANDIDIASIS** of esophagus, trachea, bronchi, or lungs.
1.12 **CRYPTOCOCCOSIS**, extrapulmonary.
1.13 **CRYPTOSPORIDIOSIS** with diarrhea persisting > 1 month.
1.14 **CYTOMEGALOVIRUS** disease of an internal organ other than liver, spleen, or lymph nodes, in a patient > 1 month of age.
1.15 **HERPES SIMPLEX VIRUS** infection causing a mucocutaneous ulcer that persists > 1 month, or bronchitis, pneumonitis, or esophagitis for any duration in a patient > 1 month of age.
1.16 **KAPOSI'S SARCOMA** in a patient < 60 years of age.
1.17 **LYMPHOMA OF THE BRAIN (PRIMARY)** in a patient < 60 years of age.
1.18 **LYMPHOID INTERSTITIAL PNEUMONIA** and/or **PULMONARY LYMPHOID HYPERPLASIA (LIP/PLH complex)** in a patient < 13 years of age.
1.19 **MYCOBACTERIUM AVIUM** COMPLEX or **M. KANSASII** disease at a site other than lungs or lymph nodes.
1.20 **PNEUMOCYSTIS CARINII** PNEUMONIA.
1.22 **PROGRESSIVE MULTIFOCAL LEUKOENCEPHALOPATHY.**
1.23 **TOXOPLASMOSIS** of the brain in a patient > 1 month of age.

1.2 The following diseases must be accompanied by a positive HIV antibody test:

1.21 **COCCIDIOIDOMYCOSIS**, extrapulmonary or disseminated.
1.22 **HIV ENCEPHALOPATHY ("AIDS Dementia Complex")** See part 2.3 of this document.
1.23 **HISTOPLASMOSIS**, extrapulmonary or disseminated.
1.24 **ISOSPORIASIS** with diarrhea persisting > 1 month.
1.25 **KAPOSI'S SARCOMA** at any age.
1.26 **LYMPHOMA OF THE BRAIN (PRIMARY)** at any age.
1.27 other **NON-HODGKIN'S LYMPHOMA** of B cell immunologic phenotype:
(a) small noncleaved lymphoma (Burkitt's tumor)
(b) immunoblastic sarcoma
1.28 any **MYCOBACTERIAL** disease, including tuberculosis, that is extrapulmonary and noncutaneous or disseminated, other than leprosy.
1.29 recurrent nontyphoid **SALMONELLA** septicemia.
1.30 **HIV WASTING SYNDROME.** See part 2.4 of this document.
1.31 **BACTERIAL INFECTIONS**, (any combination of 2 or more within a 2 year period) of the following types in a child < 13 years of age:
SEPTICEMIA, PNEUMONIA, MENINGITIS, BONE OR JOINT INFECTION, OR ABSCESS OF INTERNAL ORGAN OR BODY CAVITY excluding otitis media or superficial skin or mucosal abscesses) caused by **HEMOPHILUS**, **STREPTOCOCCUS** (including pneumococcus) or other **PYOGENIC BACTERIA.**

DEFINITION (Cont'd.):

2.0 DIAGNOSTIC METHODS.

2.1 Indicative diseases are definitively diagnosed by histology or cytology.

2.2 **Culture or antigen detection** are used to diagnose the following diseases: coccidioidomycosis, cryptococcis, herpes, histoplasmosis, mycobacteriosis, and other bacterial infections.

2.3. **HIV encephalopathy** is defined as clinical findings of disabling cognitive and/or motor dysfunction interfering with activities of daily living, or loss of behavioral developmental milestones in a child, progressing over weeks to months in the absence of a concurrent illness or condition other than HIV infection. Other illnesses can be ruled out through cerebrospinal fluid examination, brain imaging, or autopsy.

2.4 **HIV WASTING SYNDROME** is defined as an involuntary weight loss of more than 10% of baseline body weight plus either chronic diarrhea (lasting > 1 month) or documented chronic fever and weakness (lasting > 1 month) in the absence of a concurrent illness or condition other than HIV infection.

3.0 **EXCLUSION CRITERIA**--The surveillance diagnosis of AIDS is ruled out when a negative antibody test occurs, except if there is no other cause of immunodeficiency and the patient has had a disease listed in part 1.1 and a T helper cell count < 400. In the absence of an HIV antibody test, AIDS is ruled out if other causes of immunodeficiency are present, i.e., corticosteroid use or some types of lymphoma.

SOURCE:

Centers for Disease Control (CDC), MMWR, August 14, 1987, Vol. 36, No. 1S.

DELMARVA RABIES INITIATIVE

A STRATEGY TO KEEP THE DELMARVA PENINSULA FREE OF TERRESTRIAL ANIMAL RABIES:

Terrestrial animal rabies has now crossed the Susquehanna River. The Eastern Shore of Maryland plus most of Delaware and part of Virginia comprising the Delmarva Peninsula has not been invaded by the current epizootic of terrestrial animal rabies affecting all Maryland west of the Chespaeake Bay. However, there is nothing to prevent the progress of terrestrial animal rabies down the peninsula.

An opportunity exists to protect the Delmarva Peninsula and maintain it as a rabies free area. The Chesapeake Bay, Atlantic Ocean and Delaware River serve as natural barriers against the movement of rabid animals onto the peninsula. The vulnerable area is the northern attachment. The strategy consists of creating an "immune" barrier at the isthmus, thus preventing rabies from gaining access to the Shore area. Since rabies has already crossed the Susquehanna River into Cecil County, an implementation of this strategy had to begin in 1987.

The "immune" barrier is being created by using the Chesapeake and Delaware Canal as the northern edge, extend the length of the Canal approximately 20 miles from the Delaware River to the Elk River and

south 5 miles. Raccoons in this 100 square mile will be trapped during August, September, October, vaccinated intramuscularly, tagged for identification purposes, and released. When raccoons are recaptured, blood samples will be collected for serologic studies. Corollary studies will be made to evaluate the effectiveness of the trapping program. Twenty (20) trappers are employed to simultaneously live-trap the complete area during the 3 months period using box traps. Permission has been obtained from landowners before trapping.

The key to the success or failure of this strategy hinges on the ability to trap a sufficient number of raccoons to establish a "herd immunity" and prevent the movement of rabies through the corridor in the raccoon population. It will be necessary to trap and immunize a sufficient number of raccoons that would prevent the transmission of rabies from raccoon to raccoon. Rabies researchers feel that immunization of 80% of the resident raccoon population is adequate to establish the immune barrier. Most ecologists have indicated that it is possible to trap at least 80% of the raccoons in the area. A killed canine vaccine, experimentally, has been shown to be efficacious in raccoons. The program would be repeated annually to assure that the "immune barrier" is maintained.

Since at least 50% of the corridor is in Delaware, it is necessary to have the cooperation and support of Delaware. An Oversight Committee representing the Departments of Health, Agriculture, and Natural Resources of each state are the liaison contacts for the Initiative.

The trapping, vaccination and releasing of raccoons is a labor intensive undertaking and is relatively expensive. Research in Europe, using an oral rabies vaccine for foxes (i.e., the fox ingests the vaccine) indicates that rabies can be controlled with this method of administration. However, the current oral fox vaccine does not work with raccoons. Further research, currently underway in the United States, may develop an approved oral vaccine for raccoons. Since the oral vaccine could be dropped by aircraft, the cost should be reduced considerably. Therefore, the "trap, vaccination, release" program could optimistically be viewed as an interim measure until the oral vaccine is available.

The Eastern Shore would remain rabies free and thus avoid all the rabies related "hysteria" and prevent the greatly increased demands for governmental assistance. This would have a beneficial effect as far as tourism on the Eastern Shore. If the Eastern Shore becomes infected with terrestrial animal rabies, it would remain so for decades. Cost associated with the immunization of humans who are exposed to rabies will also be greatly reduced.

The Delmarva Rabies Initiative is an imaginative public health effort for controlling a signficant disease problem at a reasonable cost. The alternative would be to do nothing and watch the Eastern Shore experience the same serious problems that the Western Shore experienced as rabies progressed through the peninsula. Even if the program is not effective and rabies does break through the corridor, it could still be said that the State of Maryland did attempt to prevent the spread of rabies. If successful, it will be used as a model program for other areas where natural barriers exist.

Respectfully submitted by the Center for Special Pathogens.

Alzheimer Disease. Meridian Healthcare is helping to do something about it.

As the largest provider of long-term nursing care in Maryland, Meridian Healthcare is in a unique position to exercise some leadership in developing new techniques for caring for Alzheimer victims. Even more important, we have made a commitment to actively assist with the search for a cure for this serious, terminal condition.

A specialty Alzheimer Disease Care Unit has been created at Meridian Nursing Center—Heritage in consultation with The Johns Hopkins University Medical Institutions to develop innovative approaches to care. To advance this research, Meridian funds an Alzheimer Disease Research Fellowship in The Johns Hopkins University Department of Psychiatry.

Alzheimer Disease is a little understood, even frightening facet of aging about which more public information is needed. To address this need, Meridian Healthcare has produced a booklet on Alzheimer. This guide will be offered free in commercial radio broadcast advertising as part of Meridian's continuing public information campaign.

Our concern with Alzheimer Disease is only one of many ways Meridian Healthcare is different. For more detailed information on our Alzheimer program or on any of our 13 Nursing Centers in Maryland, call or send the coupon for our free *Referrer's Guide*.

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Letter to the Editor

Blacks' Age and Cancer Statistics

Cancer statistics vary greatly by age for all types of malignancies. Slowly being appreciated is the effect of race. A report by Baranovsky and Myers* highlighted information obtained only from white patients participating in the Surveillance, Epidemiology, and End Results (SEER) program from 1973 to 1981. All primary invasive cancers, excluding basal or squamous cell skin cancers diagnosed among persons 65 years of age or older, were considered. They noted that the incidence of all cancers in men over 65 was four times that seen between ages 45 to 64, while in women over 65, twice the number of cases were seen as compared to the group of 45 to 64 years old.

The same criteria were used in a study of 578 cancers in a black population in northwestern Baltimore. The diagnosis was confirmed in all instances by tissue study. The incidence in men in the age group over 65 was only 1.5 times that for ages 45 to 64, while in women, the factor dropped to 1.1. Clearly, in this particular black population, cancer occurs at an earlier age than in the whites in the SEER program.

This impact of cancer in blacks at an earlier age group is an interesting epidemiological assessment. The reasons why the race is more susceptible to the onset of cancer at an earlier age provides a challenging problem remaining to be resolved.

JOSEPH M. MILLER MD
Acting Chief, Surgical Service
Liberty Medical Center, Inc.

* Baranovsky, A. and Myers, M. H. "Cancer Incidence and Survival in Patients 65 Years of Age and Older." *CA* (1986): 26–41.

Doctor, Planning to Relocate?

If you are moving or planning to, please let us know so that you won't miss a single issue of the **Journal.** Just fill out the form below and mail it to: Doris Cicchini, **Journal,** 1211 Cathedral St., Balto., MD 21201.

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Signature: ..... Date: .....

Library Page

Selected Medical Literature Searches

The following are among the computerized medical literature searches provided to Med-Chi members during June 1987.

		No. of Citations
1.	Adverse effects of diving	46
2.	Aluminum toxicity	30
3.	Avascular femur head necrosis	32
4.	Dangerous behavior and forensic psychiatry	30
5.	Diagnosis and treatment of macular degeneration	39
6.	Peritoneal tuberculosis	24
7.	Petroleum products and neoplasms	25
8.	Sympathectomy for vascular disease	29
9.	Prognosis after rehabilitation for heart disease	17
10.	Viral bronchiolitis in children	19

If you would like a copy of one of these searches or a search run on any biomedical topic, call or write the library.

SUSAN E. HARMAN
Reference and Circulation Librarian

Medical and Chirurgical Faculty of the State of Maryland Library, 1211 Cathedral Street, Baltimore, MD 21201. Joseph E. Jensen, Librarian.

PHYSICIAN PLACEMENT SERVICE

The Medical and Chirurgical Faculty of the State of Maryland maintains a Placement Service for the convenience of Maryland physicians, hospitals and communities in search of candidates for positions available in our state. A detailed description of such opportunities should be forwarded to the Physician Placement Service, 1211 Cathedral St., Baltimore, MD 21201; telephone 1-301-539-0872.

Physicians wishing to locate in Maryland are invited to submit a resumé to be kept on file with the Physician Placement Service. Candidates are requested to inform the Faculty when they are no longer available for consideration for opportunities which might be available in Maryland.

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One Minute with Diabetes

Family Planning

Doctor, I am 24 years old and have had insulin dependent diabetes mellitus for six years. My husband and I want children, but I am fearful if I have a child it will be born with diabetes or a congenital deformity. We are considering adoption as an alternative course. What is your recommendation?

Certainly you are taking the intelligent approach to discuss the alternatives before entering into the rearing of a family. Let us begin with the possibility of adoption. Certainly there is a genetic risk of transferring the trait of diabetes to your offspring. You are hoping that adoption will avoid this risk. In most instances of adoption the background of the parents is unknown. I have treated several children who were adopted and who developed diabetes later. If both you and your husband are in good health except for your having diabetes, adoption is not the way to go, in my opinion.

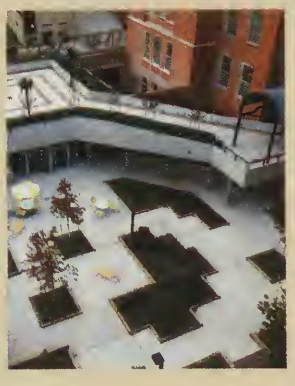
Fifty years ago pregnancies of diabetic mothers had a fetal survival rate of 54 percent in a Joslin Clinic study. Recent studies of pregnancies of well-controlled diabetic mothers have a fetal survival rate of 98 percent or better. Congenital abnormalities are believed to be more common when there is inadequate care early in the first trimester. Careful planning should begin even before conception, if possible. The body weight should be normal for one's height, and the glycohemoglobin should be within normal limits. Strict metabolic control is essential. In some very emotional or labile patients there may need to be some compromise, but it should be minimal. If the prospective mother is not willing to devote the necessary time and attention to her pregnancy, the physician should recommend postponement until such time as she is able to do it.

***De WITT E. De LAWTER* MD**
Editor

APARTMENTS WITH UNCOMMON ELEGANCE

Chesapeake COMMONS



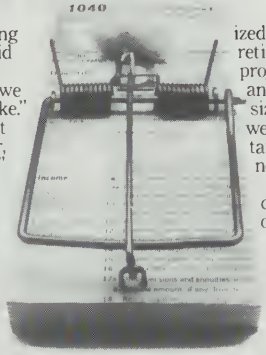


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Management of Head and Neck Tumors: Part I

The head and neck region can be divided into definite anatomic sites: the nasal cavity, the nasopharynx, the oral cavity, the oropharynx, the larynx, the hypopharynx, and the paranasal sinuses (mainly the maxillary sinuses). These sites are of great importance for the exact staging of the disease, the identification of the lymphatic drainage areas on which the surgical and or the radiotherapeutic approaches depend, and for prognosis.

The Nasal Fossa The most common tumors are benign polyps. These can be snared or excised. Malignant tumors are rare and are more common in women than men. Such tumors can be accompanied by benign polyps. The most common malignant tumor is epidermoid carcinoma. Others include adenocarcinoma (including cylindroma), lymphoma, plasmacytoma, chondrosarcoma, neurogenic tumors (including olfactory neuroblastoma), melanoma, and metastatic tumors. Surgical extirpation of the disease followed by irradiation is indicated in squamous cell and adenocarcinoma. Primary melanomas and sarcomas should be treated surgically with safe margins. This is followed by reconstruction or prosthetic rehabilitation. Lymphomas and plasmacytomas are very sensitive to radiation therapy, but the systemic disease is to be managed by chemotherapy.

The Nasopharynx Tumors of this area are rare in this country and more common in men than women. They may be silent and present as enlarged cervical lymph nodes secondary to regional metastases. The most common tumors are epidermoid or anaplastic carcinomas and lymphomas. The role of surgery in this area is to establish the diagnosis. The primary treatment is by radiation therapy. However, there is a new trend of treatment by irradiation and concomitant chemotherapy in the form of low-dose bleomycin or platinum compounds. Again, lymphomas may require systemic chemotherapy depending on the stage of the disease at the time of diagnosis.

The Oral Cavity The oral cavity consists of the upper and lower lips, the upper and lower gingiva, the mobile portion of the tongue (anterior two-thirds), the floor of the mouth, the buccal mucosa, the hard palate, and the lower jaw. Lower lip lesions are more common than upper lip lesions and are common in older men. Small lip lesions can be wedge resected with primary closure. Larger lesions requiring sacrifice of a large portion of the lip will require flap reconstruction. No regional lymphadenectomy is required unless enlarged lymph nodes are encountered. This is because of low incidence of metastases.

Lower gingival lesions are more common than those of the upper gingiva. Lesions less than 3 cm can be treated surgically, including partial mandibulectomy or by irradiation. Larger lesions are treated by radical resection including neck dissection and wide resection of the mandible followed by radiation therapy. Mandibular resections are carried out for tumors that invade the mandible. These include carcinomas of the gingiva, floor of the mouth, or primary tumors of the mandible. This results in deformity and dysfunction and can be prevented by the immediate application of the Joe Hall Morris biphasic appliance during surgery and for 12 weeks postoperatively. Such an approach results in excellent function and good cosmesis.

The floor of the mouth carcinomas are usually epidermoid cancer. Small lesions (less than 2 cm) of superficial type can be controlled by radiation therapy. Deeply invasive lesions, regardless of size, are managed by wide excision with a minimum of 2 cm margins. The defect can be reconstructed by tongue flap or nasolabial skin flaps. Larger lesions may require more extensive resection and reconstruction by deltopectoral skin flap or pectoralis major myocutaneous flap. Such resections must include radical neck dissection and postoperative radiation therapy.

The buccal lesions are usually epidermoid carcinomas and are more common in men. Verrucous carcinomas are well-differentiated epidermoid cancer, are radioresistant, and must be managed surgically. Other epidermoid carcinomas of the buccal mucosa are managed by wide local excision of small lesions (less than 2 cm) or radical resection of larger lesions followed by irradiation.

The hard palate can be the site of small osteomas, benign bone tumors that require no treatment. Larger osteomas that are symptomatic can be treated by local resection and preservation of the mucosa. The malignant tumors may include epidermoid carcinoma, cylindromas, salivary gland tumors, and bone tumors. Wide resection is the treatment of choice followed by radiation therapy. While the resection may include total maxillectomy, there is no need for prophylactic radical neck dissection. Rehabilitation of these patients must be planned prior to surgery.

The mobile portion of the tongue, that is, the anterior two thirds, extends from the tip of the tongue anteriorly to the circumvallate papillae posteriorly. Beside small traumatic granulomas, the most common tumor is epidermoid carcinoma, with an incidence of 80 percent lateral border, 10 percent dorsum, and 6 percent at the tip. Small lesions (less than 2 cm) can be treated by partial glossectomy or radiation therapy. Larger lesions require larger resections with radical neck dissection followed by irradiation.

If you have any questions, call or write the Surgical Oncology Program at the University of Maryland Medical System, Room N13E02, Baltimore, Maryland 21201 (301-328-5224).

E. GEORGE ELIAS MD
Professor of Surgery and Oncology
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Executive Director's Newsletter

September 1987

CONGRESSIONAL ACTIONS

Before Congress recessed in mid-August, organized medicine scored several significant victories in the Energy and Commerce Committee. The Committee (1)deleted the proposal for Mandatory Assignment for all radiologic services; (2)restricted the scope of that radiologic agreement to cover ONLY board certified and board eligible Radiologists, and (3) established an outright prohibition of a DRG system involving Radiologists, Anesthesiologists, and Pathologists.

In addition, the Energy and Commerce Committee amended an onerous MAAC base period provision to allow physicians who performed a procedure prior to April 1, 1984 but had no charges for that procedure submitted during April-June 1984 to obtain a full MAAC for 1988. Currently those physicians are being penalized by a rollback to a MAAC calculated at 50% of the prevailing rate. The base period for 1989 MAACs will be moved up to the 12-month period ending June 30, 1986.

The Committee included a PRO provision that prevents implementation of a PRO sanction until a physician has obtained an administrative law hearing PROVIDED there is NO finding by the Administrative Law Judge that the physician poses a serious risk to patients.

AMA MEDICARE LITIGATION

The AMA has filed a brief with the U.S. Supreme Court asking it to review the decision of the U.S. Circuit Court of Appeals for the First Circuit that upheld the constitutionality of the Massachusetts statute that requires physicians to accept the Medicare "reasonable" charge as a condition for medical licensure.

In enacting the Medicare Act, Congress deliberately gave physicians the option to charge Medicare beneficiaries an amount exceeding the Medicare reimbursement level. The Massachusetts statute explicitly eliminates this federally created option.

The high court is expected to decide later this year whether to hear the case. Petitioners are the AMA, the Massachusetts Medical Society, and Joseph J. O'Connor MD.

CHAMPUS DRG PAYMENT SYSTEM

On October 1, 1987, the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS) plans to begin a new way of paying for most inpatient hospital care in the 50 states, the District of Columbia, and Puerto Rico. The CHAMPUS diagnosis-related group (DRG) payment system is designed to reduce costs to CHAMPUS families and taxpayers. Under the new system, CHAMPUS would pay hospitals a preset price for inpatient costs for covered services based on diagnosis, regardless of actual cost of care provided.

CERTIFICATION OF X-RAY MACHINES

The State of Maryland has implemented its requirement for periodic inspections of X-ray producing machines. The machines must be certified by the state after inspection by a state-licensed inspector. The inspection fee will be approximately $35. For further details contact Robert Van Antwerp at the Dept. of Health and Mental Hygiene, Division of Radiation Control, 333-3130.

BUILDING DEDICATION

The dedication of the new Faculty Building will be held on Saturday, September 26, 1987 at 1 p.m. prior to the Semiannual session of the House of Delegates. Light lunch and tours of the building will begin at 12 noon. Free parking will be available at the Symphony Parking Garage located on the corner of Preston and Cathedral Streets. To receive free parking, have your parking ticket validated at the Reception desk at the front entrance of the new building (one door south of 1211 Cathedral Street).

OCTOBER WORKSHOPS

In October, Med-Chi will sponsor two workshops presented by nationally recognized Conomikes Associates. The first, "How To Improve Third-Party Reimbursement and Coding," will be held in Gaithersburg on Tuesday, October 20 and in Hunt Valley on Wednesday, October 21. This in-depth one-day workshop will teach the techniques of the experts compiled from years of consulting and research with the widest variety of physicians.

The second workshop, "How to Get Started in Medical Practice," will be held at Mariott's Hunt Valley Inn on Thursday and Friday, October 22-23. This two-day practice management workshop is designed for physicians who plan to go solo, join a partnership or group practice, or just need direction on which way to go.

For registration and additional information call Rae Cary at the Faculty offices, 539-0872 or toll-free in Maryland, 800-492-1056.

BREAST CANCER LAW

Please remember that effective July 1, 1987, physicians who treat breast cancer patients must comply with new informed consent requirements as a condition of licensure. Under the new law, physicians must educate their patients on alternate forms of treatment before beginning any treatment of the cancer. This requirement is met by providing to the patient (within 5 days of treatment) an informational pamphlet (provided by the Department of Health) and by having the patient sign a receipt form (also provided by the Department of Health). The legislation exempts treatment that must be provided immediately in order to save a patient's life.

Angelo J. Troisi
Executive Director

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POSTCARD CAMPAIGN IN SUPPORT OF HOUSE RESOLUTION 1272

One of the American Medical Associations's primary congressional thrusts for 1987 is seeking the enactment of a ban on advertising and promoting the use of tobacco products. Med-Chi fully supports the AMA's position on this matter, and to generate congressional support of House Resolution 1272 that would prohibit such advertising, Med-Chi has printed a supply of the attached postcard for Maryland physicians to mail to their members of the U. S. Congress whenever one of their patients dies from a smoking-related illness. The Postcard Campaign is modeled after a program developed by the British Medical Association and carries a succinct and powerful message.

HR 1272 currently has 31 cosponsors (23 Democrats and 8 Republicans). Help us gain additional cosponsors by participating in the Postcard Campaign. SEE ORDERING INFORMATION BELOW.

To receive additional postcards, contact Caroline Harman at the Faculty Office:

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Detach sample card for future use

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I wish to inform you that one of your constituents, who was a patient of mine, has died. The death was due to the following disease:

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- ☐ other tobacco-related cancer (includes mouth, larynx, esophagus cancer).
- ☐ chronic obstructive lung disease (includes emphysema).
- ☐ coronary heart disease.
- ☐ other tobacco-related vascular disease.

This person was a smoker or a smokeless tobacco user. Tobacco use is the major avoidable cause of this disease.

I urge you to co-sponsor and actively support legislation (such as H.R. 1272) that would prohibit the advertising and promotion of this uniquely harmful product. Please keep this person's tobacco-related death in mind as you consider this issue.

Sincerely,

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Inaugural George Entwisle Lecture in Hypertension: The Comparative Impact of Diastolic and Systolic Blood Pressure on Cardiovascular Risk

JEREMIAH STAMLER MD

Upon his retirement, George Entwisle MD, who served for eight years as Commissioner on the Maryland Commission on High Blood Pressure and Related Cardiovascular Risk Factors, was honored by the establishment of an annual lectureship at the University of Maryland School of Medicine, Department of Epidemiology and Preventive Medicine. We present highlights of the first inaugural lecture, given in May 1987.

Dr. Stamler is Dingman Professor of Cardiology, Department of Community Health and Preventive Medicine, The Medical School, Northwestern University.

Marjorie P. Wilson MD, Associate Dean of the Medical School, gave introductory remarks:

I am privileged to greet you on the occasion of this Inaugural Lecture. George Entwisle, whom we honor today with this lectureship, obtained his medical training and early postgraduate experience at the Boston University Medical School and the Massachusetts Memorial Hospitals. His research in the area of hypertension began at that time. He then served for two years in the Korean War on a MASH team, returning to Boston University in 1954. In 1956 he came to Maryland as an Assistant Professor of Medicine recruited by Theodore Woodward MD, then Chairman of the Department of Medicine.

Only two years later, Dr. Entwisle succeeded the first Chairman of the newly founded Department of Preventive Medicine and Rehabilitation, Maurice Pincoffs MD, who had himself retired as Chairman of the Department of Medicine two years previously.

At that time the Department had only one other full-time member, his secretary. From this beginning Dr. Entwisle laid the foundation for what has become one of the most distinguished departments of Epidemiology and Preventive Medicine in the country. He promoted the teaching of the several disciplines involved in Preventive Medicine in the freshman, sophomore, and senior years to the level of more than 100 hours of required time in the medical curriculum.

Three of the current full professors joined the department during his tenure as Chairman. He pioneered the use of computers in medicine by initiating the successful NIH grant proposal by which the computer center on this campus was first funded. His leadership was recognized at a national level by his election in 1967 as President of the Association of Teachers of Preventive Medicine. He is a Fellow of the American College of Physicians, the American Public Health Association, the American College of Preventive Medicine, and the Council on Epidemiology of the American Heart Association.

After four years he relinquished the chair of the department to devote all his time to teaching and research. During the next fifteen years he established and developed a group devoted to research into hypertension. He headed the Baltimore Center of the Hypertension Detection and Follow-Up Program, of which today's speaker, Dr. Stamler, was also a leader. These landmark studies, which led to our understanding that treatment for mild hypertension is so vital, were recognized by a Special Service Award from the Albert Lasker Foundation in 1980.

When Dr. Entwisle retired last year, he left us an uncommon legacy of achievement in teaching, research, administration, and patient care that has strengthened both the Department and the School of Medicine. Many of you here today celebrated that accomplishment in creating this lectureship in honor of George Entwisle, which our distinguished speaker, Dr. Stamler, will today inaugurate.

Roger Sherwin MD, Chairman of the Committee for the George Entwisle Lectureship, then introduced Dr. Jeremiah Stamler:

It is a particular pleasure for me to introduce our distinguished speaker to inaugurate the George Entwisle Lectureship, not only because of Dr. Stamler's distinction but also for a more personal reason: he has been in many ways a scientific parent to me.

Because his outstanding career is well known to many of you I shall summarize his long achievements quickly in order to leave a moment or two to try to convey how much it has meant to me and to many of my contemporaries to have the opportunity of working side by side with Jerry Stamler.

Dr. Stamler obtained his bachelor's degree from Columbia University in 1940 and his MD from the State University of New York at Downstate Medical Center only three years later. After military service at the end of World War II and a Fellowship in pathology, he began his career in cardiovascular disease as a Fellow with Dr. Louis Katz at Michael Reese Hospital in Chicago in 1948. Just as Dr. Stamler has been a scientific parent to me, so I believe, was Louis Katz to Dr. Stamler, and no lecture of his would be complete without a tribute to the inspiration that Louis Katz provided.

Dr. Stamler became an established investigator of the American Heart Association in 1955 and in 1958 was appointed director of the Heart Disease Control Program of the Chicago Board of Health. In 1961 he assumed responsibility for the whole chronic disease control division of the Board, and two years later he became Director of Adult Health and Aging, a position he held for six years. He rose in academic rank at Northwestern University Medical School, finally becoming Professor of Cardiology. He also holds appointments at the University of Chicago, and at several Chicago hospitals.

I shall not attempt to describe in detail his research achievements. It will suffice to say that he, more than any other individual, founded the discipline of preventive cardiology and that he has published more than 600 scientific papers.

I was much in awe of Dr. Stamler when, as a very junior investigator I first had the opportunity of working with him in the context of a collaborative clinical trial, The Multiple Risk Factor Intervention Trial, in 1972. One of the great advantages of large collaborative studies is the opportunity they provide to work side-by-side with leaders of one's discipline, and it is in this way I have learned so much from Dr. Stamler. But just as there are many advantages to working with these studies, there are also disadvantages. It is much more difficult to obtain individual credit to publications that involve the work, in some cases, of hundreds of people. Jerry Stamler addressed this problem with great vigor and success. He has assumed responsibility for ensuring that the academic careers of his junior (often very junior) colleagues in no way suffer from participating in these important but sometimes rather impersonal studies. I am grateful to have this opportunity to express my appreciation of all that Jerry has done for me and many of my contemporaries.

I hope to have been able to make clear why I believe Dr. Stamler to be ideally qualified to inaugurate this important tribute to George Entwisle.

It's a pleasure to be here and an honor to be the first George Entwisle Lecturer in Hypertension. George and I came to know each other in the work of the Hyper-

HBP Commentary is contributed by the Maryland Commission on High Blood Pressure and Related Cardiovascular Risk Factors, 201 W. Preston St., Baltimore, MD 21201 (301-225-5891). Editors: R. Patterson Russell MD, Past Chairman; Donald O. Fedder PharmBS, DrPH, Chairman; and Carol Lewis MPH, ScD, Executive Director.

tension Detection and Follow-Up Program (HDFP)[1] at a time when the situation of hypertension was epitomized by ½ × ½ × ½. That is, half the hypertensives were undetected; half the detected ones, untreated; and half the treated ones, still hypertensive. Thus only an eighth of the hypertensives were detected, treated, and controlled. Thirty-two million, sixteen million, eight million, and four million were the numbers estimated at that time. George tackled this problem in a clinical trial, under the most difficult circumstances, or putatively the most difficult circumstances, in the inner city of Baltimore, where the trite view was that especially "these people" will not adhere to long-term medication for an asymptomatic condition, let alone be recruited for long-term trials. George proved that was all hogwash, including stereotypes of low-income blacks who reside in the inner city of Baltimore. He set an example, along with other colleagues who worked in such communities as Washington, DC; Birmingham, AL; Jackson, MS; and elsewhere in the country, that in fact tens of millions of people with hypertension were indeed intelligent, as most Americans with health concerns are. When a decent program came along, with a decent explanation and decent opportunities for access to it, all strata of the population, rich or poor, more urban or less urban, inner city or outer city, blue collar or white collar, and black or white responded.

Let me illustrate the consequences of that effort, because it is appropriate to note what George did here in Maryland. When one compares the situation by sex and by race in terms of the prevalence of elevated blood pressure in the population in the early 1970s (when the National High Blood Pressure Education Program began) with the late 70s, for each of the major sex and race groups the prevalence of elevated blood pressure has gone down.

This is a measure of the demise of ½ × ½ × ½; that is, the great majority of hypertensives are now detected, treated, and by some criteria, controlled. George contributed to this in a major way.

The trends in mortality data illustrate a consequence of that: the marked, steady decline in coronary mortality, and the even steeper decline in stroke mortality, at a rate that is remarkable, about 5 percent per year. Now Americans' stroke death rates are among the lowest in the industrialized world (Figure). Many people are not aware that all cardiovascular diseases have declined markedly, much more than noncardiovascular diseases in our country. These are age-standardized, overall mortality rates from 1970 to 1984. The data on percent decrease for white male, white female, nonwhite male, nonwhite female show a major decrease for the black population, especially for black women, who started at much higher levels than white women. This phenomenal accomplishment is due to many things. Certainly progress with the hypertension problem is a major component of this remarkable decline and puts our country in first place among countries in terms of

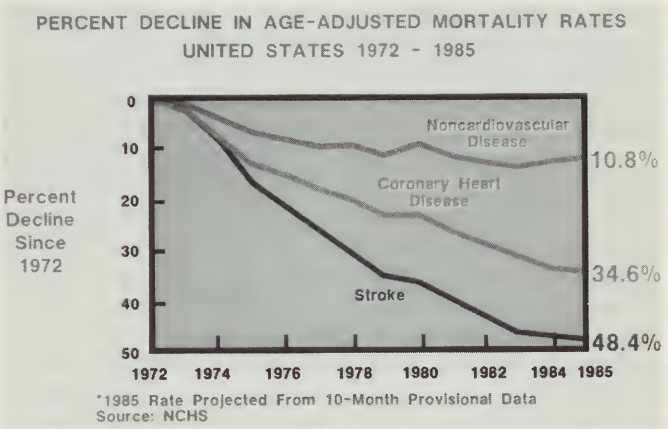


Figure. Percent decline in age-adjusted mortality rates United States 1972–1985.

the rate of decline. This is so for men and for women. We used to be second highest in coronary death rates, we are now number eight; in stroke we are at the low end.

In talking about another's professional accomplishments, it is relevant to place him in context of the larger picture when he has been a significant force relating to that larger picture. The contribution George has made, and others with him, is measurable by statistics. In terms of its pioneering nature, particularly putting an end in the hypertension field to therapeutic nihilism, "judicious neglect," and "people won't come in and people won't comply," George has a record of which he and all of us can be very proud. So it's a particular pleasure to be here today, George, to note the broader canvas of your career.

Dr. Stamler then discussed the main topic of his presentation, the comparative impact of systolic and diastolic blood pressure on cardiovascular risk. He explained how it had been customary, especially since World War II, to focus on diastolic rather than systolic blood pressure both to define hypertension and to monitor treatment. The importance of systolic blood pressure was only recognized explicitly in the context of the elderly, in whom isolated systolic hypertension is seen relatively frequently. The Framingham study of about 5,000 individuals was among the first to suggest that systolic blood pressure may be even more important as a predictor of future disease than diastolic blood pressure, even in early adult life, although combined data from several other US prospective studies (which, together with Framingham constituted the National Cooperative Pooling Project), did not appear to support this view.[2,3]

Dr. Stamler next presented data from the life insurance industry dealing with millions of people, mainly in the era before satisfactory treatment for hypertension was available. These studies enjoy the advantage of having large numbers but the possible disadvantage of observer biases. The data do suggest that, at a given

level of diastolic pressure, the systolic pressure has definite additional influence on life expectancy.

The insurance industry data was followed by a large new data set consisting of more than 350,000 men screened for possible recruitment to the Multiple Risk Factor Intervention Trial (MRFIT), by far the largest data set collected under scientifically monitored conditions.[4] The cause-specific mortality for these individuals has been determined six years after screening. These data confirm that the risk of death increases from the lowest levels of both diastolic and systolic pressure, and that the greatest burden of hypertension, in terms of excess deaths, occurs in the range of 85 to 104 mm Hg—commonly considered as "high normal" and "mild" hypertension—despite risk elevation of 79 to 160 percent. Again, with systolic pressure the "excess deaths" are concentrated in the 130 to 159 mm Hg range, that is, the so-called "normal" or "borderline" levels of systolic pressure.

Dr. Stamler presented a series of special analyses of the MRFIT data demonstrating that systolic blood pressure becomes a progressively better predictor of both coronary and all-cause deaths than diastolic blood pressure as age increases beyond about 45 years. He also returned to previous data from the Hypertension Detection and Follow-up Program that suggested the impact of treatment on systolic pressure, as well as on diastolic pressure, was a predictor of outcome.

The clinical implications of these findings indicate we should consider the *systolic* pressure as well as the diastolic in deciding whether to treat a given patient, and we also should consider the *impact* of treatment on systolic as well as diastolic blood pressure.

Data was presented illustrating the importance of considering other risk factors (in particular blood cholesterol, cigarette smoking, and diabetes)—as well as both systolic and diastolic blood pressures in determining the overall risk of a patient and the optimal approaches to the reduction of that risk. Dr. Stamler also emphasized that the same conclusions appear to apply to women, based on available data sets.

Finally, Dr. Stamler focused on the group who reported having had a heart attack before the MRFIT screening (more than 5,000 men). Both diastolic and systolic blood pressure, as well as the other risk factors just mentioned, remain as important predictors of risk and important therefore as potential targets of intervention.

The full text of Dr. Stamler's comments on this topic, including detailed presentation of data, will be published; we shall keep *Commentary* readers informed.

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2. Dawber, T.R. *The Framingham Study.* Cambridge, MA: Harvard University Press, 1980.
3. Pooling Project Research Group. *Relationship of Blood Pressure, Serum Cholesterol, Smoking Habit, Relative Weight and ECG Abnormalities to Incidence of Major Coronary Events: Final Report of the Pooling Project.* Dallas: American Heart Association, 1978.
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Executive Committee and Council Actions

Executive Committee - May 14, 1987

The Chairman, Dr Lee-Llacer, requested a brief moment of silence in honor of Karl F. Mech MD, who died on May 10.

• **Commission on Medical Discipline** The Committee endorsed Robert G. Kindred MD for reappointment to the Commission and will recommend their selection to Council on May 21. There being no nominees received for the vacancy created by Reynaldo Lee-Llacer MD (one-year term), no recommendations will be made to Council for this appointment at this time.

• **AMA Benjamin Rush Award** David B. Stoeckle MD, endorsed by the Dorchester County Medical Society as their nominee for this award, was approved by the Committee for submission to the AMA.

• **Gold MasterCard** The Med-Chi Gold MasterCard was approved for endorsement to the membership. The card is serviced by MNBA, a subsidiary of the Maryland National Corporation, and offers an array of benefits and services. The interest rate is 14.9 percent, and there is no participation fee to members for the first year. MNBA has agreed not to solicit other services to the members. A small amount of nondues income will be earned from this program. Members may charge their dues to this "Gold Card."

• **Blue Cross/Blue Shield "Caring" Program** Action on this was deferred until the Council meets on May 21. In the interim, staff was asked to learn more details of this proposal. The Committee was informed that the Subcommittee on Adolescent Health will review the "Caring" program package and make a recommendation to Council on May 21.

• **Physician Fee Guide** Executive Director Angelo Troisi reported on recent discussions with the Attorney General's office. Following some discussion, the Committee decided to (1) revise Med-Chi's introductory letter to the fee guide, to be reviewed by the Executive Committee prior to submission and (2) send a letter to Mr. Curran expressing Med-Chi's interest in helping to produce a correct and valid fee guide. Med-Chi is prevented from doing this on its own by the FTC regulations (restraint of trade), but we would be willing to work with the Attorney General to create a more appropriate document.

• **Proposed Statement on Physician Dispensing** It was moved and seconded that this statement be forwarded to the Committee on Professional Ethics for reconsideration of Faculty policy with a request for the Committee to bring Council its recommendation.

• **Robert Wood Johnson Grant Application** Med-Chi was notified on May 13 that the Robert Wood Johnson Foundation had awarded a $280,000 demonstration grant for physician peer review to a joint project of the Johns Hopkins University, Med-Chi, the Commission on Medical Discipline, and the Maryland Hospital Association. About $75,000 of the grant is related to Med-Chi's portion of the application.

• **Accidental Insurance Coverage** Accidental insurance coverage, presently in effect, covers Faculty officers, committee members, and employees while traveling on official Faculty business. Staff will notify these specific groups of this $50,000 coverage to the beneficiary in the event of death while traveling on official Med-Chi business.

• **Medical Payment System** American Medical Communications, Inc., (AMCom) and Medical Payments System, Inc. (MPS) have selected Maryland as the next state to participate in the nationwide MPS program. The MPS program allows physicians to file claims to third-party payors electronically, so that claims reporting and payment will be much faster and easier.

Med-Chi and several component societies have entered into a contractual arrangement with AMCom and MPS to support the marketing of MPS for financial consideration. The medical societies will provide advertising and promotional space in their publications, training activities, facilities, exhibit space at all annual meetings, as well as other appropriate marketing support. A marketing plan is being developed for implementation as soon as possible.

• **HSCRC** Mr. Troisi reported that Med-Chi has been asked for nominees who might be interested in the position of HSCRC Executive Director to replace Mr. Hal Cohen, who announced his resignation. The Committee had no recommendations but requested to be kept informed of those being considered for this position.

• **Executive Committee Meeting Dates** A motion was adopted to continue to meet at 4 p.m. on the dates presently set, pending Council's decision on its meeting dates and times.

• **MMLR** The Committee reviewed and approved two draft letters (presented by president Leon E. Kassel MD) prepared in response to a letter from MMLR concerning organization of the coordinated effort among the subspecialty societies, with MMLR serving as liaison, to initiate a program designed to reduce professional liability costs in Maryland. The Committee decided to approve the correspondence presented and that these letters were a continuation of Council's decision to discontinue the relationship with MMLR.

• **AIDS** Mr. Troisi reported that a Governor's Statewide Task Force on AIDS will be established. The Committee recommended that J. D. Drinkard MD, Chairman of the Ad Hoc Committee on AIDS, serve on this task force. A motion was made and seconded that the Executive Committee voice its distinct pleasure with Dr. Drinkard's representation of the Faculty in his efforts to educate physicians and the public alike on the subject of AIDS.

• **Executive Committee Minutes** These minutes of the Committee were approved: January 8, February 12, March 19, and April 16, 1987. The actions contained in these minutes were accepted by Council on April 29, 1987.

• **Task Force on Membership** The Committee was informed that the task force report has been sent to the Component societies for review and comment before submission to Council. Mr. Troisi noted that through a redefinition of tasks, a present staff member would be able coordinate this membership recruitment effort and would be gathering data and identifying potential members in preparation of implementation of task force recommendations.

Council - May 21, 1987

• **Karl F. Mech MD** Chairman Reynaldo Lee-Llacer MD called for a moment of silence in memory of Karl F. Mech MD, past president of the Faculty, who died on May 10, 1987.

• **Resident Councilor** The Chairman introduced Marcel Salive MD, the newly elected councilor and president of the Resident Component Society.

• **Minutes Adopted** These minutes of the Council and Executive Committee were acted upon: Council minutes approved, April 29 and May 1, 1987; Executive Committee actions accepted, May 14, 1987.

Joseph Snyder MD questioned an item in the May 14, 1987 Executive Committee minutes regarding the Public Relations Committee's proposal to change the "Consultation" radio program from station WNTR to WBAL. A motion was passed to accept the Executive Committee minutes of May 14, 1987 with the exception of the radio program item to be discussed later in this meeting.

• **Commission on Medical Discipline** The Chairman presented nominations for the three-year term on the Commission. After deliberation, Council nominated Robert G. Kindred MD, Orthopedic Surgeon, Rockville, to serve on the Commission for the term 1987–1991. Dr. Kindred is presently serving the remainder of Dr. Thomas C. Cimonetti's term on the Commission.

Council considered further nominations to fill the vacancy created by Dr. Lee-Llacer by virtue of his position as Chairman of Council (one-year term). Voting by ballot twice ended in a tie. President Leon E. Kassel MD moved and it was seconded that both nominees be submitted to the Commission for this position. They are Edilberto Beltran MD, Anesthesiologist, Baltimore, and Charles F. Hobelman, Jr., MD, Anesthesiologist, Baltimore.

• **Professional Ethics Committee** A proposed revision of the statement on Public Releases in Connection with Mass Screening Surveys and Research Programs was presented by Louis Breschi MD, Chairman of the Committee. Council voted to table the statement until its September meeting to allow sufficient time to study the issue.

• **Accidental Insurance** Council was updated on the accidental insurance program the Faculty has had in effect for many years. The plan provides coverage up to $50,000 for Faculty officers, committee members, and employees while traveling on official business for the Faculty. This will be included in the *Maryland Medical Journal* as update information.

• **Council Survey** Results of the recent survey of the Council were presented for discussion and decision.

1. Council Meeting Date and Time: Twenty-four councilors requested 4 p.m., and 9 requested other times. Physicians from outlying areas of the state consider 4 p.m. an inconvenient time in view of the three or four hours driving time to and from Baltimore and a very late return home. A motion was made and passed to meet on Saturdays at 10 a.m.; Council voted unanimously that a continental breakfast will be served at the meetings.

2. Ad Hoc Committee to Study Role Relationship between the Executive Committee, Council, and House of Delegates Survey results produced 15 volunteers to serve on this ad hoc committee. The Chairman is awaiting additional names of physicians in order to provide a more equitable geographic representation on the committee.

3. Health Care Forum (a) Med-Chi Health Care Forum: the Chairman reported results of the surveys regarding the Faculty's involvement in the establishment of its own health care forum.

In conjunction with the Annual Meeting—8 votes

In conjunction with the Semiannual Meeting—8 votes.

As a separate event—13 votes

This issue will be remanded to the Executive Committee for further study.

(b) Delegate Young's Health Convocation: after review and discussion of the position prepared by staff as directed by the Council at its previous meeting, Council voted in favor of full sponsorship of the Convocation for the year 1987 with reassessment of our position next year. A letter will be directed to the Convocation pointing out that this action was taken following a detailed review of the Convocation's financial history as well as its goals and purposes, and further, clearly spelling out that this was not a political matter but rather support of the Health Coordinator.

• **Blue Cross/Blue Shield Caring Program** Upon recommendation from the Subcommittee on Infant, Child, and Adolescent Health, and Council endorsed the Blue Cross/Blue Shield Caring Program. However, efforts will be made to insure that the Caring Program is a statewide program, that Med-Chi has representation on the Caring Program Board, and that efforts be made to include subspecialty groups.

• **Emeritus Membership** Council approved Emeritus Membership for the following physicians at the request of the component society indicated:

Baltimore City	Evangelina M. Ramos MD Owings Mills
	George S. Tan MD Annapolis
Baltimore County	Mary E. Matthews MD Baltimore

Wicomico County	William C. Morgan MD Salisbury

• **Dues Waiver** Council approved 1987 dues waiver for Heinrich J. Losemann MD, Butler (illness) as requested by the Baltimore City Medical Society.

• **Gold MasterCard** Council approved the Med-Chi gold MasterCard for endorsement to the membership. The card is serviced by MBNA, a subsidiary of the Maryland National Corporation and offers an array of benefits and services. The interest rate is a low 14.9 percent, and the card is available at no participation fee to members for the first year. MBNA has agreed not to solicit other services to members. A small amount of nondues income will be earned from this program. Members may charge their dues to this "Gold Card."

• **Medical Mutual Rate Filings** Council was informed that the Faculty had received a copy of the rate filings and that staff were reviewing them. An invitation from Medical Mutual for a "walk-through" discussion is planned for May 29 or 30, and the Chairman urged Council members to attend. Executives of component societies also will be advised of the date for the "walk-through" discussion.

• **Robert Wood Johnson Foundation** The Faculty was notified on May 13 that the Robert Wood Johnson Foundation had awarded a $280,000 demonstration grant for physician peer review to a joint project of the Johns Hopkins University, Med-Chi, the Commission on Medical Discipline, and the Maryland Hospital Association of which about $75,000 are related to Med-Chi's portion of the application.

• **CME Credits** Joseph Snyder MD presented a motion passed by the Montgomery County Medical Society and requested Council's support. The motion, after amendment, was adopted as follows:

> The Medical and Chirurgical Faculty of the State of Maryland opposes any restriction in the awarding of any CME credits based upon the relationship of the clinical content to the specialty of the physician attendee.

It was the consensus of Council that this motion be transmitted to the Board of Medical Examiners with an expression of strongest opposition to any unilateral change to the present CME program.

• **"Consultation" Radio Program** Dr. Snyder questioned the Public Relations Committee's plan to use radio station WBAL in lieu of WNTR for the "Consultation" program, noting that he thought the program should be in other parts of the state besides the Baltimore area. Further, because the program had been so successful, Dr. Snyder suggested there be two programs. It was pointed out that WBAL can be heard in Montgomery and Prince George's Counties and that a limited budget allows only one program. At this time Med-Chi has not received a proposal from WBAL accepting our program.

• **Cardiology Tours** Donald H. Dembo MD requested that anyone interested in working on cardiology tours to Australia see him after the meeting.

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Members in the News

George Demetrakopoulos MD, MPH, Bethesda, presided over the recent meeting of the Confederation of Clinical Nutrition Societies, held in Washington, DC. The meeting consisted of delegates from the AMA, American Academy of Certified Medical Nutritionists, American Society of Clinical Nutrition, American Society for Parenteral and Enteral Nutrition, the American College of Nutrition, the American Institute of Nutrition, and the National Institutes of Health, with the goal of promoting collaboration among medical societies and institutions with interest in clinical nutrition and coordinating the advancement of clinical nutrition in education, policy, and medical practice. Dr. Demetrakopoulos, the Director of the Medical Nutrition Center of Greater Washington, DC, is the Immediate Past President of the American Academy of Certified Medical Nutritionists.

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Malcolm F. Freed MD was recently elected President of The North Charles Hospital's Medical Staff. Dr. Freed, Chief of Gynecology at North Charles, is a graduate of the University of Maryland School of Medicine. Serving with Dr. Freed as Medical Staff Officer is **Henry I. Babitt** MD, Vice President.

• • •

Sheppard Kaplow MD has been appointed Head, Department of Anesthesiology at Saint Joseph Hospital, Towson. He previously served as Head of the Division of OB Anesthesia at Sinai Hospital.

• • •

James C. Murphy III MD has been appointed Head of the Division of Orthopaedics at Maryland General Hospital. A graduate of Colgate University, Dr. Murphy received his MD from the University of Maryland. He completed a residency in orthopaedic surgery and was clinical instructor in the Department of Surgery, Division of Orthopaedic Surgery at the University of Maryland Hospital.

• • •

Nasser Resai MD, Chief of Gynecology at Church Hospital Corporation, has been elected to the position of President of The Obstetrical and Gynecologic Society of Maryland for the term of July 1, 1987 through June 30, 1988. Dr. Rezai received his MD from Tehran University in Iran. He completed his residency in gynecology and obstetrics at Franklin Square Hospital in Baltimore. He has been Chief of Gynecology at Church Hospital since 1979 and also is Assistant Professor of Gynecology and Obstetrics at The Johns Hopkins Hospital in Baltimore.

• • •

Lyle T. Saylor MD has been appointed as Chairman of the Department of Diagnostic Imaging (formerly Department of Radiology) at St. Agnes Hospital. Dr. Saylor received his medical degree from Hahnemann Medical College in Philadelphia. He served his residency in general radiology at the University of Maryland Hospital as well as a fellowship in neuroradiology, including angiography and CT head scanning.

• • •

Jack M. Zimmerman MD (right), Chief of Surgery at Church Hospital, received a special citation from J. Glenn Beall Jr., Chairman of the Board of the Maryland Hospital Association. Dr. Zimmerman was honored for his three terms as Chairman of the MHA's Professional Practices Committee and member of the group's Executive Council. The committee he led is one of MHA's seven permanent policy panels.



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Karl F. Mech MD—Surgeon, Anatomist, Church Leader
June 23, 1910–May 10, 1987

Dr. Mech was a life-long resident of Baltimore. His main interests centered on his profession and his church work. He chose to pursue his professional activities until one week prior to his death.

Dr. Mech was born June 23, 1910, the seventh of eleven children. He was educated in the Baltimore City Schools and graduated from the Baltimore City College in 1928. It was noted in his high school yearbook that he was a fine all-round athlete.

Dr. Mech attended the University of Maryland as an undergraduate and graduated from the University of Maryland School of Medicine in 1935. He then served as an intern and resident in surgery at the St. Agnes Hospital. During this time, he married Marian Rushton, also of Baltimore. Following his residency, he served in the US Army for four years during World War II. Dr. Mech was stationed at the Haloran General Hospital on Staten Island, NY, and at that time became involved in the first clinical research on penicillin. He left the army in 1946 with the rank of Lieutenant Colonel.

After returning to Baltimore to resume his practice in general surgery, Dr. Mech also resumed teaching anatomy at the University of Maryland School of Medicine. He continued this teaching until 1986. He also served as a civilian consultant to the US Army at Fort Meade and the Veterans Administration at Fort Howard.

Dr. Mech first joined the Medical and Chirurgical Faculty of Maryland in 1939. He was the chairman of the Legislative Committee for 18 years following his return from the army. He served as Treasurer of Med-Chi from 1964 through 1974. He was Vice-President in 1974 and in 1975 served as President.

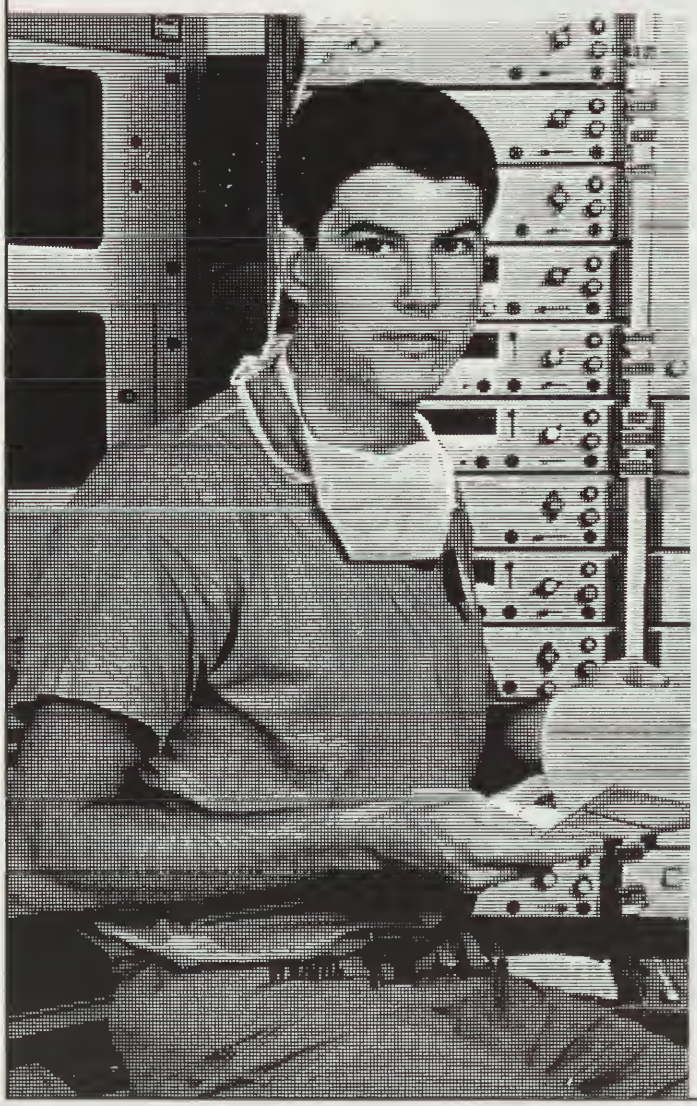
In the early 1950s, Dr. Mech and his family moved to Roland Park. At that time, Dr. Mech joined the Grace Methodist Church where he continuously served as a Sunday School teacher, most recently teaching the Wesley Bible Class. He was a member and Chairman of the Board of Trustees, and the Administrative Board. In addition, he served for many years as a member of the Board of Governors of the Wesley Theological Seminary.

In 1955, Dr. Mech became a member of the Board of Directors of Blue Cross and Blue Shield of Maryland. He was the Medical Director of that organization from 1958 through 1980. He was a member of the state Board of Medical Examiners for 17 years. He also served on the Commission of Medical Discipline from its inception in 1969 until 1985, when he assumed the position of Executive Secretary, which he held until his death.

After returning from the army, Dr. Mech resumed his relationship with the St. Agnes Hospital where he was a Senior Attending Surgeon. He served as Chairman of the Department of Surgery from 1963 through 1969. He was in the private practice of surgery until only a short time before his death. He was a diplomate of the American Board of Surgeons, a member of many surgical societies and numerous professional societies. His service to the community has been widely acknowledged, including a Governor's Citation given in May 1986 and a Citizen's Citation presented to him by Mayor Burns in February 1987.

Dr. Mech had been a widower since December 10, 1971 when his wife, Marian Rushton Mech died. He is survived by his three children: Karl Frederick Mech, Jr., MD, Constance Cooper Mech, and Laura Mech Getschel, and his four grandchildren: Karl Frederick Mech III, Marian Elisabeth Getschel, Leonard George Getschel III, and Karl Mech Getschel.

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Report—AMA White Paper on Adolescent Health

The second "heavy" that the AMA put out at the Annual Meeting was their report on Adolescent Health Care. According to them, our teenagers have the least adequate health care of any segment of our population and some of the worst and most baffling health problems. In the first paragraph of the report, the following statement is made: "both morbidity and mortality rates for adolescents are 11 percent higher today than they were 20 years ago." As the mother of a 10, 11, and 14 year old, I am frightened by this statement.

The report deals with areas of substance abuse, sexuality and pregnancy, victimization, psychological disorders/suicide, and violence/trauma. There are facts and statistics related to each of these areas that demonstrate the fatal impact of alcohol and drug use by teenagers in car accidents, incidence of pregnancy and high-risk infant mortality, and the devastation of teen suicide.

Recommendations center on outreach programs and gaining the trust of teens. The AMA also has produced a film on teen suicide that can be shown in high schools or organizations that cater to teens. Public service announcements have been produced addressing many of these problems. Copies of the report were made available to all state presidents, who were encouraged to disseminate this information to their counties.

The AMA plans on being a clearing house for all information dealing with teen health problems.

This report opens an avenue for the societies and auxiliaries to cooperate in an area that is virtually untapped by any other organization or agency. It is an area where we can make positive inroads into a devastating problem. If each Maryland auxiliary and society made a concerted effort to contact local school boards to obtain permission for showing the film on teen suicide, it might be the start of gaining that elusive teen trust. From there, who knows what we could do?

NANCY H. HOWELL
Editor

Auxiliary to the Medical and Chirurgical Faculty of the State of Maryland. Mrs. Ching Barretto President; Mrs. Nancy H. Howell Editor.



Mary Strauss, President-elect of the AMA Auxiliary

Mary Strauss, Hagerstown, was elected president-elect of the American Medical Association Auxiliary at the organization's June 1987 Annual Session of the House of Delegates in Chicago.

Mrs. Strauss, who is married to pediatrician Albert J. Strauss, Jr., MD, will serve as president-elect for one year before assuming the office of AMA Auxiliary president in June 1988. She is the first woman from Maryland to be elected as president-elect of the AMA Auxiliary.

Locally, Mrs. Strauss has been active in both the Washington County Auxiliary and the Auxiliary to the Medical and Chirurgical Faculty of the State of Maryland, serving as president of both organizations: in 1976 of the Washington County Auxiliary and in 1979–80 of the Auxiliary to Med-Chi. Her interests always have focused on health, educational, and religious activities.

Among her other volunteer and civic activities, Mrs. Strauss has coordinated programs at Western Maryland Hospital and Fharney Keedy Nursing Home and was a founder and first president of PACE of Washington County, an advocate group for gifted children.

The AMA Auxiliary is a nationwide, volunteer organization of 80,000 physicians' spouses, whose members work in state and county chapters to improve community health and provide support to the medical profession.

Information for Authors

Med-Chi members reading papers before organizations, are invited to submit their papers to the MMJ for consideration for publications.

The *Maryland Medical Journal* is the monthly publication of the Medical and Chirurgical Faculty of the State of Maryland. Its goals are educational and informative: the publishing of scientific articles and other technical information as well as editorials, special articles (evaluations, position papers, reviews of nonscientific subjects), membership news, notices of medical events, legislative and governmental news, meetings, continuing education courses, and programs and policies of the Faculty.

Manuscripts may be sent to Editor *MMJ*, 1211 Cathedral St., Baltimore, MD 21201. Articles are accepted for publication on the condition that they are contributed solely to this journal. Transmittal letters should designate one author as correspondent and include his/her address and telephone number. Manuscripts are reviewed by the editor, editorial board members, and guest reviewers. The final decision is reserved for the Editor.

Specifications

Manuscripts must be original typed copy, double-spaced throughout (including text, case reports, legends, tables, and references) with margins of at least one inch. Number pages consecutively. Please submit two additional copies.

Include in the manuscript the concise title, full name of the author (or authors) with highest degree, academic and professional titles, affiliations, and any institutional or other credits.

An introductory synopsis/abstract of approximately 100–150 words is required.

Tables are to be typed on separate sheets of paper, numbered, and have a brief descriptive title. The Editor reserves the right to edit tables. Be sure that statistics are consistent in both tables and text.

References are limited to those citations noted in the text. References are to be typed double-spaced and numbered consecutively as they appear in text. They will be examined critically at the time of review and must be kept to a minimum. The number of references is generally limited to 20 in major contributions and fewer in shorter articles. Exceptions may be made if appropriate in the opinion of the reviewing editor. Personal communications and unpublished data should not be included. The following are necessary: names of all authors, complete title of article cited (lower case), name of journal abbreviated according to *Index Medicus*, volume number, first and last page numbers, and year of publication. For more extenisve information about preparing medical articles for publication, the editors suggest the International Committee of Medical Journal Editors: Uniform requirements for manuscripts submitted to biomedical journals. The complete document is available in the June 1982 issue of the *Annals of Internal Medicine*.

Illustrations are material that cannot be set in type. Photographic material must be submitted as high-contrast, glossy prints. Drawings and graphs must be done professionally in india ink on high-grade white drawing paper. *Omit illustrations that do not increase understanding of text, and limit them to a reasonable number.* Four or fewer illustrations should be adequate for a manuscript of 4 to 5 typed pages. Legends are to be typed on a separate sheet of paper. Type on a gummed label and affix to the back of each illustration: figure number, title of manuscript, name of senior author, and arrow indicating top. Legends for illustrations should be typed on a separate page with numbers corresponding to those on the photographs and drawings. *Cost of printing color* photographs must be borne by the author.

Recognizable photos of patients are to be masked and should carry with them written permission for publication.

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Editorial Responsibility

Manuscripts are subject to editorial modification and such revisions necessary to bring them into conformity with *Journal style*.

Galley proofs will be mailed to the principal author and, if not returned by the specified date, will be considered approved as typeset.

Statements made or opinions expressed by any contributor in any article or feature published in the *Journal* are the sole responsibility of the author.

Med-Chi's Photo Contest

"Lion in Tree, Kenya" submitted by Laurence E. Rubin MD, Silver Spring, was the first place winner in the black and white category of the 1987 Photo Contest, an annual event concurrent with Med-Chi's Annual Meeting.

Taken by Dr. Rubin while on safari with his family in Kenya, Africa, the photo was shot from an open vehicle while traveling through the untamed countryside. Dr. Rubin, his wife Eileen, and their three children journeyed to Kenya in celebration of the couple's 25th wedding anniversary.

Dr. Rubin's interest in photography began as an outgrowth of his passion for ophthalmology, and when he was fifteen, his first picture was published in a local St. Louis newspaper. Throughout the years he has worked diligently to perfect his talent, and though never formally trained, he has learned to create photographs with a perfect sense of balance, light, and proportion such as the one below.

Last month, Dr. Rubin's work was on display at the Studio I Gallery in Washington, DC as part of a show for the Washington Center for Photography.



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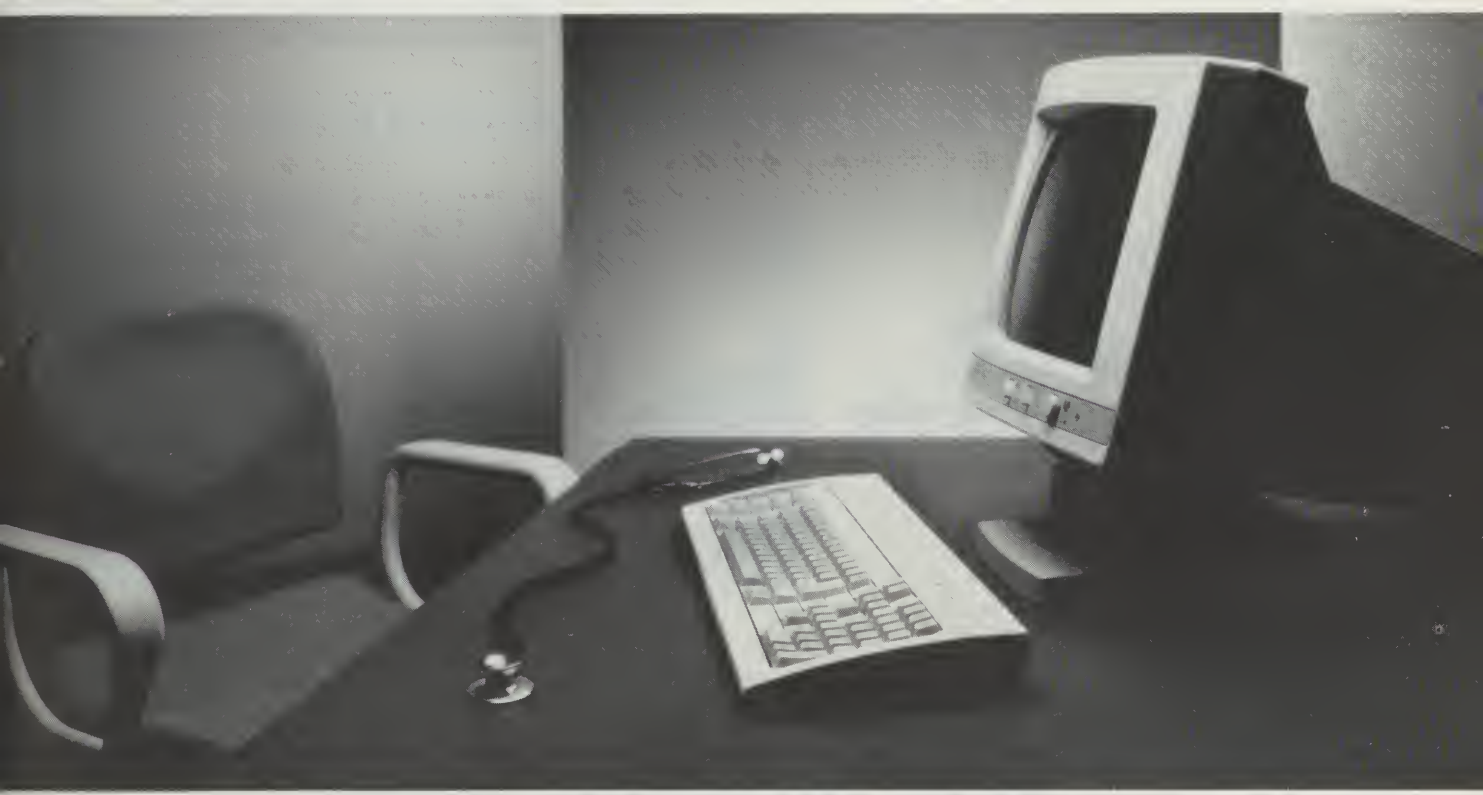
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Sue Stephens, VP Lending discusses plans with Dr. Edward Perl. Reisterstown Federal provided financing for the Eldersburg Medical Center.

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Like conventional INDERAL Tablets, INDERAL LA should not be used in the presence of congestive heart failure, sinus bradycardia, cardiogenic shock, heart block greater than first degree, and bronchial asthma.

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Please see next page for brief summary of prescribing information.

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BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR.)*

INDERAL® LA brand of propranolol hydrochloride **(Long Acting Capsules)**

DESCRIPTION. INDERAL LA is formulated to provide a sustained release of propranolol hydrochloride. INDERAL LA is available as 60 mg, 80 mg, 120 mg, and 160 mg capsules.

CLINICAL PHARMACOLOGY. INDERAL is a nonselective, beta-adrenergic receptor-blocking agent possessing no other autonomic nervous system activity. It specifically competes with beta-adrenergic receptor-stimulating agents for available receptor sites. When access to beta-receptor sites is blocked by INDERAL, the chronotropic, inotropic, and vasodilator responses to beta-adrenergic stimulation are decreased proportionately.

INDERAL LA Capsules (60, 80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with INDERAL LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of INDERAL Tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially.

INDERAL LA should not be considered a simple mg-for-mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to INDERAL LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, INDERAL LA has been therapeutically equivalent to the same mg dose of conventional INDERAL as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure and rate pressure product. INDERAL LA can provide effective beta blockade for a 24-hour period.

INDICATIONS AND USAGE. Hypertension: INDERAL LA is indicated in the management of hypertension; it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. INDERAL LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: INDERAL LA is indicated for the long-term management of patients with angina pectoris.

Migraine: INDERAL LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

CONTRAINDICATIONS. INDERAL is contraindicated in 1) cardiogenic shock; 2) sinus bradycardia and greater than first-degree block; 3) bronchial asthma; 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.

ONCE-DAILY

INDERAL® LA

(PROPRANOLOL HCl)

LONG ACTING CAPSULES



WARNINGS. CARDIAC FAILURE: Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or INDERAL should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following *abrupt* discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned, the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (eg, chronic bronchitis, emphysema) —PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY: The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, eg, dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA: Beta blockers should be used with caution in diabetic patients if a beta-blocking agent is required. Beta blockers may mask tachycardia occurring with hypoglycemia, but other manifestations such as dizziness and sweating may not be significantly affected. Following insulin-induced hypoglycemia, propranolol may cause a delay in the recovery of blood glucose to normal levels.

THYROTOXICOSIS: Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol may change thyroid function tests, increasing T_4 and reverse T_3, and decreasing T_3.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case, this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS. GENERAL: Propranolol should be used with caution in patients with impaired hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta-adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be told that INDERAL may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

CLINICAL LABORATORY TESTS: Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS: Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if INDERAL is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

Caution should be exercised when patients receiving a beta blocker are administered a calcium-channel-blocking drug, especially intravenous verapamil, for both agents may depress myocardial contractility or atrioventricular conduction. On rare occasions, the concomitant intravenous use of a beta blocker and verapamil has resulted in serious adverse reactions, especially in patients with severe cardiomyopathy, congestive heart failure or recent myocardial infarction.

Aluminum hydroxide gel greatly reduces intestinal absorption of propranolol.

Ethanol slows the rate of absorption of propranolol.

Phenytoin, phenobarbitone, and *rifampin* accelerate propranolol clearance.

Chlorpromazine, when used concomitantly with propranolol, results in increased plasma levels of both drugs.

Antipyrine and *lidocaine* have reduced clearance when used concomitantly with propranolol.

Thyroxine may result in a lower than expected T_3 concentration when used concomitantly with propranolol.

Cimetidine decreases the hepatic metabolism of propranolol, delaying elimination and increasing blood levels.

Theophylline clearance is reduced when used concomitantly with propranolol.

CARCINOGENESIS, MUTAGENESIS, IMPAIRMENT OF FERTILITY: Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

PREGNANCY: Pregnancy Category C. INDERAL has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. INDERAL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

NURSING MOTHERS: INDERAL is excreted in human milk. Caution should be exercised when INDERAL (propranolol HCl) is administered to a nursing woman.

PEDIATRIC USE: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular: Bradycardia; congestive heart failure; intensification of AV block; hypotension; paresthesia of hands; thrombocytopenic purpura; arterial insufficiency, usually of the Raynaud type.

Central Nervous System: Light-headedness; mental depression manifested by insomnia, lassitude, weakness, fatigue; reversible mental depression progressing to catatonia; visual disturbances; hallucinations; vivid dreams; an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics. For immediate formulations, fatigue, lethargy, and vivid dreams appear dose related.

Gastrointestinal: Nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: Pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: Bronchospasm.

Hematologic: Agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-Immune: In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous: Alopecia, LE-like reactions, psoriasiform rashes, dry eyes, male impotence, and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.

DOSAGE AND ADMINISTRATION. INDERAL LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily. If patients are switched from INDERAL Tablets to INDERAL LA Capsules, care should be taken to assure that the desired therapeutic effect is maintained. INDERAL LA should not be considered a simple mg-for-mg substitute for INDERAL. INDERAL LA has different kinetics and produces lower blood levels. Retitration may be necessary, especially to maintain effectiveness at the end of the 24-hour dosing interval.

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ANGINA PECTORIS — *Dosage must be individualized.* Starting with 80 mg INDERAL LA once daily, dosage should be gradually increased at three- to seven-day intervals until optimal response is obtained. Although individual patients may respond at any dosage level, the average optimal dosage appears to be 160 mg once daily. In angina pectoris, the value and safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS).

MIGRAINE — *Dosage must be individualized.* The initial oral dose is 80 mg INDERAL LA once daily. The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimal migraine prophylaxis. If a satisfactory response is not obtained within four to six weeks after reaching the maximal dose, INDERAL LA therapy should be discontinued. It may be advisable to withdraw the drug gradually over a period of several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS — 80-160 mg INDERAL LA once daily.

PEDIATRIC DOSAGE — At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

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Heart Transplantation: The Johns Hopkins Hospital Experience

WILLIAM A. BAUMGARTNER MD, SHARON AUGUSTINE RN, STEPHEN C. ACHUFF MD, KENNETH L. BAUGHMAN MD, ARTHUR FELDMAN MD, TIMOTHY J. GARDNER MD, THOMAS A. TRAILL MD, and BRUCE A. REITZ MD

Marked changes have been observed in the evolution and development of heart transplantation since the 1970s. Following the introduction of cyclosporine in 1980, heart transplantation has increased significantly each year with over 1,000 patients having undergone the procedure in 1986 in the United States.

From The Johns Hopkins Medical Institutions, Baltimore. **Reprints:** William A. Baumgartner MD, Dept. of Surgery, Blalock 618, The Johns Hopkins Hospital, 600 N. Wolfe St., Baltimore, MD 21205 (301-955-5248).

The initial era of heart transplantation was characterized by the pioneering work of Norman E. Shumway MD at Stanford University Medical Center. In addition to providing the experimental basis for heart transplantation, he and his colleagues resolved problems of denervation, developed successful immunosuppressive protocols, and instituted the use of the endomyocardial biopsy for the diagnosis of rejection. This experience resulted in the successful clinical application of cardiac transplantation during the 1970s. By 1980, patients had a 64 percent one-year survival rate in the Stanford program using a combination of azathioprine and prednisone.[1] At that time, there were eight active centers in the United States performing approximately 40 to 50 heart transplants a year. In 1986 over 1,000 patients had heart transplants in approximately 95 hospitals throughout this country.

Patients and Methods

Our criteria for acceptance of heart transplant patients include age less than 60 years, New York Heart Association Class IV, expected survival less than one year, good compliance and motivation, and strong family support. The present contraindications to cardiac transplantation include insulin-dependent diabetes; severe vascular disease; irreversible liver and kidney disease; pneumonia or a recent pulmonary embolus; history of alcohol, drug abuse, mental illness, and carcinoma; and elevated pulmonary vascular resistance (>6 Wood units).

Recipient characteristics of the 73 patients who have undergone heart transplantation are summarized in Table 1. The majority of recipients are from Maryland or surrounding states.

The present immunosuppressive protocol used is illustrated in Table 2. Methylprednisolone was given intravenously in the perioperative period followed by the administration of prednisone at 0.2 mg/kg and azathioprine 2 mg/kg when the patient tolerated oral intake. Patients were discharged from hospital on a prednisone dose of 0.2 mg/kg/day and azathioprine at a dose that resulted in a white blood count reduction between 4-5000 cells/mm^3.

Cyclosporine was administered preoperatively at a dose of 10 mg/kg. If, however, the patient's creatinine was elevated above 2 mg%, the dose was reduced to 6 mg/kg. It was then given daily postoperatively in two divided doses, either orally or by nasogastric tube. Daily serum creatinine and whole blood cyclosporine levels were obtained. Cyclosporine whole blood levels were assayed using a high-performance liquid chromatography method.[2] For the initial three postoperative months, levels between 150 ng/ml and 400 ng/ml were considered therapeutic. Cyclosporine dose was assiduously adjusted based on therapeutic blood levels and serum creatinine. One patient required hemodialysis following transplantation, but this resolved over a 2.5 week period. Cyclosporine was then slowly tapered with a target of 5 to 6 mg/kg at 6 months, to maintain whole blood levels between 75 to 150 ng/ml.

Our original immunosuppressive protocol included only prednisone and cyclosporine. However, since patients exhibited toxicity with these medications, aza-

Table 1. Recipient* Characteristics

Male/Female	
60/13	
Age (yrs)	
41 (Range: 1.5–57)	
Diagnosis	
Ischemic Heart Disease	15
Cardiomyopathy	56
Congenital Heart Disease	2
Geographical Distribution	
Maryland	46 (63%)
Surrounding states	16 (22%)
Distant states	11 (15%)

* 1983 = 4; 1984 = 13; 1985 = 21; 1986 = 28; 1987 = 7 (to date); Total 73

Table 2. Immunosuppressive Protocol

	Solumedrol	Prednisone	Azathioprine	CyA
Pre-op	—	—	—	10 mg/kg
Intra-op	500 mg	—	—	—
Peri-op	125 mg q8h × 3 doses	.2 mg/kg	2 mg/kg	10 mg/kg
Long term	—	.2 mg/kg	1–2 mg/kg	5 mg/kg

thioprine was often added to the immunosuppressive regimen. Because of this experience and the accumulated information with "triple-drug" therapy, the protocol was changed in January 1987 to include azathioprine with cyclosporine and low-dose prednisone as initial maintenance immunosuppression.

Rejection was diagnosed by endomyocardial biopsy. Moderate rejection, consisting of a lymphocytic infiltrate and myocyte necrosis necessitated treatment.[3] Biopsies were obtained every seven to ten days for the first six weeks and then reduced to monthly intervals. Thereafter, the frequency of biopsies was decreased to every three months or as indicated by rejection episodes.

Donors

Recipients were listed by the Maryland Organ Procurement Center (MOPC) on the computerized registry of the United Network for Organ Sharing (UNOS). MOPC provides education for the hospitals and public of Maryland, assists hospitals in donor procurement, and coordinates the activity of the three Maryland hospitals involved in organ transplantation. Listing is by age, blood type, weight, and category of illness. Category 0 refers to patients who are critically ill and on assist devices. Category 1 are inpatients on inotropic support, Category 2 are hospitalized but stable patients, and Category 3 refers to outpatients.

Specific requirements prior to donor acceptance include verification of the donor blood type and weight (donors weighing less than 20 percent of the recipient weight generally were rejected). Declaration of brain death and organ consent also were verified. The prospective crossmatch was required only for recipients who had antibody evidence based upon a prospective recipient crossmatch with a panel of random donors.

Criteria for donor acceptance are summarized in Table 3. Because of the increasing recipient demand, extended criteria for donor acceptance are being employed in many transplant centers, including ours. This includes extension of the donor age and assessment of hemodynamic criteria after careful cardiac exam and echocardiography.

Table 3. Criteria for Heart Transplantation

Age* <40 for males; <45 for females
Absence of
Prolonged cardiac arrest
Severe chest trauma
Pre-existing cardiac disease
Intracardiac injections
Septicemia
Stable without high-dose inotropic support

* Detailed history and evaluation required

Primary cause of death in this series of heart donors was head trauma (55 percent); gunshot wounds (21 percent), cerebral vascular accident (19 percent); asphyxiation (4 percent); and brain tumor (1 percent). Mean age was 25 years with a range of 3 to 41 years. Geographical distribution of donors was

- local (Baltimore) 15%
- Maryland 10%
- Out of state 75%

Mean donor heart ischemic time was 169 minutes with a range of 48 to 320 minutes. Donor hearts were transported from distances as far as 1,000 miles.

Recipient waiting times for appropriate donors have increased in each category. Patients in Category 0 (desperately ill) had a mean waiting time of 6.4 days in 1985, increasing to 24.0 days in 1986, reflecting the proliferation of transplant hospitals in the eastern United States and resultant diminution of potential donors.[4] These alarming statistics and our pretransplant recipient mortality of 8 percent provided the impetus to provide interim support using left ventricular assist systems for recipients who deteriorate before a donor heart is available. This technique of bridging to transplantation has been used for two patients, resulting in successful transplantation and survival of one patient and the death of another patient while on the device. This latter patient was on the activated transplant list for 3.5 weeks prior to his death.

Major Morbidity

Rejection One hundred thirty-eight rejection episodes occurred in 71 patients, yielding a ratio of 2.6 rejections per patient. Using a linearized rate, this represents 0.48 episodes per patient-month in the first three months and 0.10 episodes per patient-month subsequently.

Standard treatment for early (<3 months) rejection consisted of intravenous administration of methylprednisolone (1 gram) every day for three days. Oral prednisone was then initiated at 100 mg and tapered over a two-week period to maintenance (Table 4). Many late rejection episodes (>3 months) were controlled by increasing oral prednisone to 100 mg for three consecutive days followed by a 5 mg/day taper to maintenance level. Rejection episodes refractory to steroid therapy required additional immunosuppressive agents. Patients received ATGAM* initially. If no improvement was observed on biopsy, rescue therapy was initiated (Table 5). Twelve patients received a complete course of therapy with OKT3.** Rejection was reversed in all but one

* Atgam (lymphocyte immune globulin, antithymocyte globulin [equine]), The Upjohn Company, Kalamazoo, MI.

** Orthoclone OKT*3, Ortho Pharmaceutical Corporation, Raritan, NJ.

patient; however on follow-up biopsy, approximately one month later, moderate rejection was seen in seven patients, necessitating additional treatment with antithymocyte globulin or oral prednisone.

Infection Infection occurred at a frequency of 0.07 episodes per patient-month. This frequency compares favorably with other series and is less in reported rates in patients treated with conventional immunosuppression.[5,6] The general categories and number of infectious episodes were

cutaneous	10
urinary tract	6
mediastinitis	4
pulmonary	20
septicemia	14
gastroenteritis	5
meningitis	3
sinusitis	2
genital	5
oropharynx	6
ear	1
heart	1
colon	1
subphrenic abscess	1
prepatellar knee bursa	1
abdominal wound	1

Infections categorized according to etiologic agent are summarized in Table 6.

Other Complications of Immunosuppression Nephrotoxicity associated with cyclosporine was defined as a creatinine >2.0 mg%. This was seen in 46 percent of the patients in the first three postoperative months and 35 percent subsequently. It represented the primary reason for immunosuppressive modulation, that is, cyclosporine dose was decreased and azathioprine was added as well as for switching to "triple-drug" therapy. Hypertension requiring treatment was observed in 75 percent of the patients. Steroid complications including osteoporosis and aseptic necrosis were observed in four patients requiring substitution of azathioprine for prednisone. Lymphoproliferative disorder was diagnosed in two patients.[7]

One asymptomatic patient presented with an enlarged cervical lymph node and no other evidence of tumor involvement. Immunosuppression was reduced, and the patient presently is asymptomatic ten months after diagnosis. A second patient who presented acutely with overwhelming pulmonary infection and sepsis was found to have widely disseminated lymphoma at postmortem exam. Coronary angiography was performed postoperatively in 38 patients (1 year), 14 patients (2 years) and 4 patients (3 years). Moderate coronary

Table 4. Treatment of Rejection

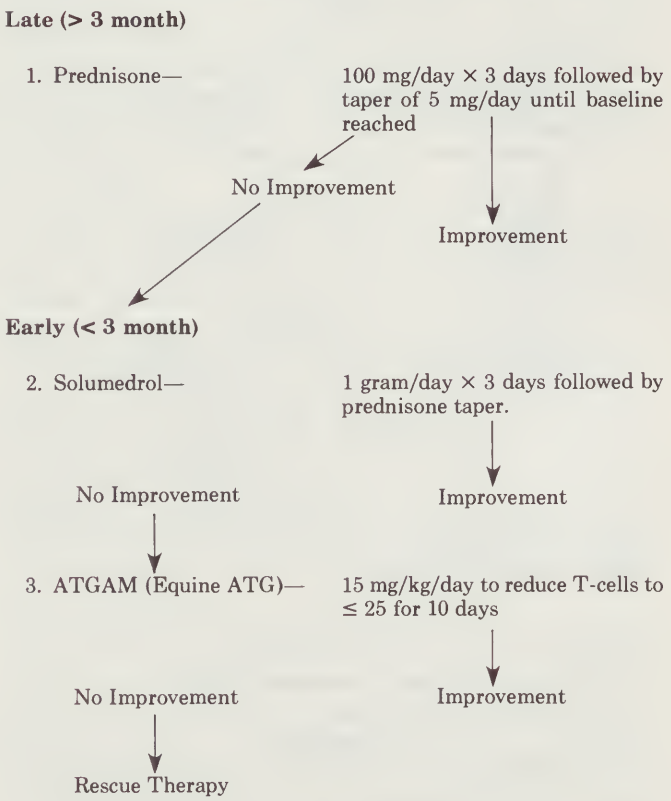


Table 5. Rescue Therapy

1. OKT3—Monoclonal antibody 5 mg/day for 10 days
2. Rabbit ATG—100 mg/day to reduce T-cells to ≤ 25 for 10 days

Results

	Patients Treated	Patients with Improved Biopsy	Patients with Rebound Rejection
OKT3	12*	10	7
Rabbit ATG	6	5	1

* One patient died before completing the course.

Table 6. Infections According to Etiologic Agent

Bacterial		Viral	
Streptococcus	3	CMV*	6
Staphylococcus	10	Herpes Zoster	4
Nocardia	2	Rotovirus	1
Campylobacter	1	HSV†	10
Hemophilus	5		
Salmonella	1	Fungal	
E-Coli	3	Aspergillus	2
Listeria	1	Candida	3
Clostridium	1	Citrobacter	1
Cryptococcus	1		
Klebsiella	1	Protozoa	
Enterobacter	2	Pneumocystis	5
Pneumococcus	2	Toxoplasmosis	1
Proteus	1		
		Mycobacterium	
		Marinum	1
		Tuberculosis	2
		Unknown	12

* CMV = cytomegalovirus
† HSV = herpes simplex virus

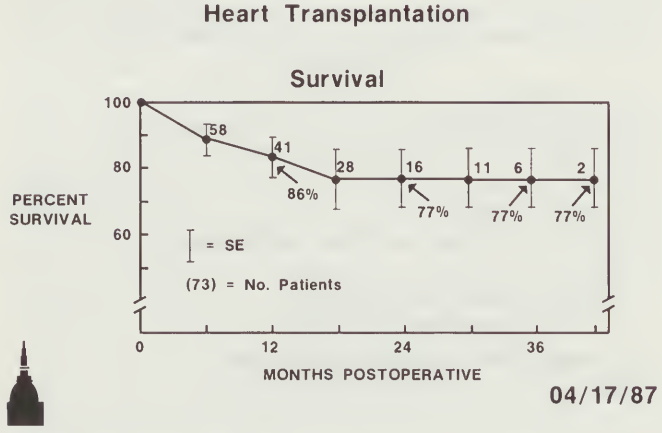


Figure. Actuarial Survival

artery disease was seen in two patients. Left ventricular dysfunction was minimally depressed in one patient.

Survival

Ninety-seven percent of patients were discharged from the hospital. The actuarial survival (± SEM) was 86 percent ± 6, 76 percent ± 8, and 76 percent ± 8 at 1, 2, and 3 years respectively (Figure). Twelve patients died from these causes

- Rejection 4
- Infection 5
- Pulmonary hemorrhage 1
- Carcinoma/lymphoma 2

Cumulative follow-up of the patients was 1,135 months with a mean of 16 months and a range of 0 to 44 months. Ninety-two percent of patients were rehabilitated (defined as a return to a "life-style" similar to that prior to their illness). Eighty-eight percent of patients judged their quality of life to be good to excellent following operation. Although no patients have undergone retransplantation, it represents a viable alternative for those who develop unremitting rejection or significant coronary artery disease.

Cost of Transplantation

Table 7 summarizes the mean, median, and range of hospital charges (initial and one year) for heart transplant recipients at The Johns Hopkins Hospital during the period July 1983 to April 1986. Cyclosporine costs at one year (5 mg/kg/day) for a 70 kg recipient was $4,472/year. The cost of prednisone (0.2 mg/kg/day) for the same patient was $44/year. Azathioprine (2 mg/kg/day) costs the recipient $700/year.

Table 7. Transplant Charge Summary July 1983—April 1986

	Mean	Median	Range
Transplant hospitalization (N = 42)			
LOS*/admission (days)	29	24	4 to 60
Total cost/patient	$55,483	$50,721	$13,799–$132,448
First year post-transplant hospitalization			
LOS/patient (days)	21.6	12	3 to 64
Total cost/patient	$18,039	$7,396	$2,203–$52,605

* LOS = length of stay

The median length of stay was 24 days. One hundred fifty-seven hospital readmissions occurred for

- Infection 51
- Rejection 55
- Others 51

This represented a linearized frequency of 0.14 readmissions/patient month for approximately 2.3 readmissions/patient. Since initiating an outpatient protocol for the treatment of rejection using intravenous steroids, the readmission rate for rejection has decreased.

Discussion

Significant advances have occurred in heart transplantation over the past five years. These changes reflect better recipient selection, donor evaluation, and immunosuppressive medications.[8] Statistics obtained from the Registry of the International Society of Heart Transplantation show a statistical difference in survival of heart transplant patients based upon type of immunosuppression.[9] Patients receiving cyclosporine had a one-year survival rate of 78 percent as compared to 58 percent with conventional immunosuppression. More recent data suggest that transplantation using "triple-drug" therapy results in a better survival compared with cyclosporine and prednisone alone.

In addition to prolongation of survival and a better quality of life, the time of hospitalization and associated cost of transplantation has diminished dramatically over the past five years. A patient's average length of stay is approximately two to four weeks compared with two to three months previously observed with conventional immunosuppression. Accordingly, the cost of transplantation has been reduced. The majority of third-party insurance carriers now cover heart transplantation. Medicare recently approved coverage of transplantation in selected patients at designated heart transplant hospitals. Further legislative action based upon the recommendation of the Task Force on Heart Transplantation includes the creation of a National Organ Procurement Center designated as the United Network for Organ Sharing (UNOS). This agency will coordinate and oversee the distribution and allocation of donor organs.

The overall success of organ transplantation has resulted in greater public acceptance of organ donation as evidenced by numerous favorable newspaper, television, and magazine articles. A recent Gallup poll reported that 73 percent of respondents said it was appropriate for the physician to initiate discussion regarding organ donation, and 83 percent stated that they were likely to approve their loved ones' request to donate organs after death. A study by the Hastings Center concluded that the shortage of donors is not necessarily related to public attitudes but rather unwillingness of health care providers to ask families whether they had considered organ donation.[10] This study has resulted in the appearance of "required consent" laws on the legislative calendars of many states, including Maryland. Passage of this law in Oregon and California has resulted in an increase of donated organs of all types.

However, problems continue to exist in heart transplantation. The rapid proliferation of hospitals doing heart transplantation may lead to diminishing quality of care for some transplant recipients. This also will limit the number of available donors to the more experienced institutions resulting in fewer transplant procedures and diminishing clinical research. The development of coronary artery disease in the grafted heart remains an elusive problem. Detectable by coronary angiography, this process occurs in approximately 40 percent of patients at five years post transplantation.[11] Hypertensive and nephrotoxic side effects of cyclosporine continue to represent morbidity for the heart transplant recipient.

The worldwide experience over the last five years has documented the therapeutic value of heart transplantation in the management of selective patients with endstage heart disease. Transplantation of the heart has evolved from the experimental stage to a clinically accepted form of therapy resulting in extended survival and a quality of life better than any previous experience.

Acknowledgment

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HIV Infection in Baltimore: Antibody Seroprevalence Rates Among Parenteral Drug Abusers and Prostitutes

W. ROBERT LANGE MD, FREDERICK R. SNYDER PhD, DAVID LOZOVSKY MD, VIVEK KAISTHA MD, MARY A. KACZANIUK BA, and JEROME H. JAFFE MD

When parenteral drug abusers (PDAs) in Baltimore (N = 184) were screened for HIV antibodies the seroprevalence rate was 29 percent. For both males and females, blacks were more likely to be positive than whites; and for both blacks and whites, females were just as likely to be positive as males. The occurrence rate was highest in black females, 63 percent. Among a subsample of prostitutes with heavy drug-use histories, the prevalence rate was 34 percent. HIV infection was highest in predominantly black neighborhoods in center city. We conclude HIV has appreciably penetrated the Baltimore addict community with seroprevalence rate among black PDAs approaching that of New York City, and preliminary findings indicate HIV has infected many prostitutes with heavy drug use histories.

From the Addiction Research Center, National Institute on Drug Abuse, Baltimore. **Reprints:** W. Robert Lange MD, P.O. Box 5180, Baltimore, MD 21224.

Parenteral drug abusers (PDAs) and prostitutes are major reservoirs for the transmission of Human Immunodeficiency Virus (HIV), and this carrier pool constitutes the principal source for its introduction into previously low-risk populations. Soon after the condition that became known as Acquired Immunodeficiency Syndrome (AIDS) came to public attention during the summer of 1981, when cases of Pneumocystis pneumonia and Kaposi's sarcoma were reported in active male homosexuals in New York and California,[1,2] PDAs were identified as a high-risk group. Among the 20 percent of AIDS cases occurring in heterosexuals by September 1982, the prevalence of intravenous drug abuse was 60 percent,[3] and by the end of 1984, 17 percent of all AIDS cases had a history of IV drug abuse as the principal risk factor.[4] However, the CDC hierarchical classification of AIDS cases underestimates the number in which illicit drug use may play a role, since homosexuals who are PDAs are designated with only the former risk factor. Independent of other risk factors, at least 27 percent of reported cases of AIDS occur in individuals with a history of parenteral drug use,[5] and the figure may exceed 32 percent.[6]

Less well understood are the extent to which HIV has penetrated the addict community and what cofactors increase the probability of infection or contribute to the pathogenesis of AIDS in this population. Most domestic AIDS cases associated with illicit drug use have occurred in the northeastern United States, with the greatest concentration in the New York City metropolitan area.[7]

Seroprevalence surveys for HIV antibodies have yielded widely varying results, and data collected outside the New York City area for the most part are not comprehensive and generally consist of either anecdotal or preliminary reports. A compilation of the various seroprevalence surveys conducted in various U.S. cities is summarized in Table 1.

Seroprevalence surveys for HIV antibodies in women with histories of prostitution have likewise shown varying results since testing began in 1984. In sub-Saharan Africa, where heterosexual exposure is thought to be a primary mode of HIV transmission, prevalence rates in prostitutes have ranged from 1 percent in Ghana to 88 percent in Rwanda.[16] In Europe as well as in the United States, HIV infection rates in female prostitutes are believed to be closely associated with the magnitude of parenteral drug abuse. Infection rates in female prostitutes in various U.S. cities are summarized in Table 2; the situation relative to male prostitutes is unknown.

Table 1. Prevalence of HIV Antibodies in Parenteral Drug Abusers in Selected U.S. Cities

Locality	Seroprevalence Rate (percent)
New York, NY[8–11]	40–87
Caguas, Puerto Rico[12]	59
New Haven, CT[13]	10
San Francisco, CA[14,15]	5–10
Los Angeles, CA*	1–2
Denver, CO**	1–2

* Los Angeles Co. Health Department, unpublished data
** Crowley, T.J., unpublished data

Table 2. Prevalence of HIV Antibodies in Female Prostitutes in Selected U.S. Cities

Locality	Seroprevalence Rate (percent)
Newark, NJ[16]	57
Washington, DC*	50
Miami, FL[16,17]	19–40
San Francisco, CA[16]	6
Seattle, WA[17]	5
Los Angeles, CA[16]	4
Colorado Springs, CO[16]	1
Atlanta, GA[16]	1
Las Vegas, NV[16]	0

* Howard University, unpublished data

Our investigation was designed to determine the prevalence of HIV antibodies in a sample of substance abusers in Baltimore and to ascertain differences between seropositive PDAs and those not yet infected. In addition, the subset of the sample that related a history of having engaged in sex for drugs or money was compared with the remainder without a history of prostitution in regard to the prevalence of HIV antibodies.

Methods

Following their participation in an AIDS educational program and with their informed consent, 184 PDAs from eleven major opiate addiction treatment programs in metropolitan Baltimore were enrolled in this study. Recruitment and screening occurred between September and November 1986. Individuals were enrolled in 1986 into a program of either acute heroin detoxification or chronic methadone maintenance, or they were on a waiting list for such enrollment. Therefore the latter subjects were still on street heroin.

Potential subjects were approached in the clinic, informed of the purpose of the study, and asked to participate. Out-of-treatment subjects learned of the study through a chain-referral technique. All participants had documentable histories of chronic IV drug use and had stigmata of needle use. Participants completed a standard questionnaire to obtain demographic, sexual, drug use, medical, and behavioral information. For the purpose of this study, prostitution was defined as having engaged in sex for either money or drugs within the previous five years.

Reliability of the survey form was tested by assessing the concordance of responses between PDAs of similar drug use and demographic background, and validity was tested by conducting a follow-up interview on a 10 percent sample of the study participants. For the purpose of this investigation, it was anticipated the study questionnaire was both reliable and valid.

Following completion of the questionnaire, serum was collected from each subject and stored at −70° C prior to testing for HIV antibodies. Antibody testing was performed in duplicate by enzyme-linked immunosorbent assay (ELISA) using commercially available test kits (Genetic Systems, Inc., Seattle, WA). All ELISA positives were confirmed by Western Blot testing, and the results were read by three observers. Sera with bands at the p24 and/or gp41 regions were considered positive, in accordance with criteria established by the CDC.

Data analysis was performed using the chi-square test for categorical variables. Because of the highly skewed nature of needle sharing data and the fact that so few respondents had never shared needles, frequency of needle sharing was categorized as a function of the actual distribution into low, medium, or high levels of this activity.

Results

The sample consisted of 144 (78 percent) males and 40 (22 percent) females; 97 (56 percent) were black and 76 (44 percent) were white. The age range was 18 to 48 years, mean 30 ± 6.8 years. Thirteen (7 percent) of the participants admitted to being homosexual, and 41 (22 percent) acknowledged having engaged in prostitution in the preceding five years. Twenty-two percent of the sample gave a history of having been treated for a sexually transmitted disease, and 23 percent had been diagnosed as having clinically evident viral hepatitis. Eighty-eight (48 percent) of the sample knew their methadone dose, which ranged from 25 to 180 mg, including street methadone. The median and modal methadone dose was 60 mg. All participants had used cocaine intravenously, and 41 (22 percent) had used inhalable nitrites (poppers). The age of first IV heroin use ranged from 12 to 37 years (median 16 years) and of first IV cocaine use, from 13 to 42 years (median 20 years).

Fifty-four (29 percent) of the sample were seropositive for HIV antibodies by both ELISA screening and Western Blot confirmatory testing. Table 3 depicts the demographic distribution of HIV markers, and Table 4 further breaks down the results by race and gender. For both males and females, blacks were more likely to manifest HIV antibodies than were whites (Odds Ratio = 8.18, 95 percent CI 3.35 to 19.97). Overall, females were just as likely to be positive as were males (32.5 percent *vs* 28.5 percent, respectively). This racial dif-

Table 3. Prevalence of HIV Antibodies in 184 Parenteral Drug Abusers in Baltimore, 1986

Characteristics	Number Tested	Number Positive	Percent Positive
All Subjects	184	54	29
Sex			
Male	144	41	28
Female	40	13	32
Race*			
Black	97	44	45
White	76	7	9
Age**			
Under 25	15	3	20
25–29	40	13	33
30–34	58	17	29
35–39	42	12	29
40+	22	6	27

* Race missing for 11 subjects
** Age missing for 7 subjects

ference persisted regardless of gender.

The seroprevalence rate was highest in black females (63 percent). There were no significant differences in age between seropositive and negative members of the sample, but within those who were seropositive, significant differences did exist, with the 25 to 29-year-old component having the highest infection rate, which was 33 percent ($X^2 = 12.431$, $p < .01$). Geographic differences were detected within the metropolitan area (per zip code) and are depicted in the Figure. There was no difference in seroprevalence among subjects in treatment by type of program, nor were there differences between those enrolled in treatment and those waiting to be enrolled.

Among the 41 subjects who admitted to having engaged in prostitution, 27 (66 percent) were male. Coincidentally, 66 percent were black and 34 percent were white. Overall, females were more likely to have engaged in prostitution than males (35 percent *vs* 19 percent), and blacks more often than whites (28 percent *vs* 18 percent); however, these differences failed to achieve statistical significance at the $p < .05$ level.

The HIV infection rate was not significantly different between male and female prostitutes (33 percent and 35 percent respectively), but there were significant differences between the blacks (48 percent) and the whites (7 percent) who had engaged in this practice ($X^2 = 9.50$, $p < .01$). When the data are further evaluated by race and gender, differences in infection rate become more pronounced: black females 67 percent, black males 43 percent, white females 13 percent, and white males 0 percent ($X^2 = 16.30$, $p = .001$). Because of the low numbers in some categories, care must be exercised in interpreting these results.

Needle sharing was very common among this sample, in fact 173 (94 percent) had shared needles. Only one nonsharer was seropositive, a female whose sex partner was also at high risk for AIDS. The median number of people with whom needles had been shared during the preceding 12 months was four, and for the preceding five years, the median number was ten. Among the study participants who had shared with two or fewer people during their last year of heroin abuse, 29 percent were seropositive; among those who had shared with three to six persons, 23 percent; and among those who had shared with more than six persons, 47 percent were positive ($X^2 = 6.80$, $p < .05$). Over the preceding five years, the percent of persons seropositive were 27 percent, 17 percent, and 45 percent, respectively, for low, medium, and high needle sharing activity ($X^2 = 8.19$, $p < .01$). Seven participants admitted to sharing with more than 50 people in the last year, and 22 (13 percent of sharers) claimed they had shared with at least 50 people over the last five years. There were no apparent

Table 4. Prevalence of HIV Antibodies by Race and Sex in Baltimore Drug Users, 1986

Characteristic	Number Tested	Number Positive	Percent Positive	Odds Ratio
Black				
Male	81	34	42	5.3
Female	16	10	63	7.9
White				
Male	52	4	8	1.0
Female	24	3	13	1.6

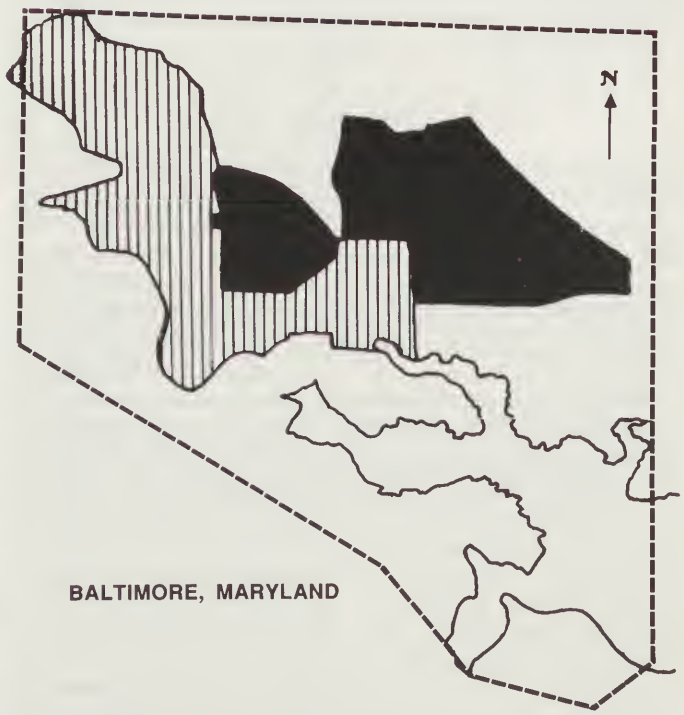


Figure. HIV seropositivity is not uniformly distributed throughout the metropolitan area, and it is most concentrated in zip codes characterized by heavy black representation and close approximation to center city.

■—Zip codes encompassing at least 10 percent of the sample, seroprevalence rate of at least 25 percent
□—Zip codes encompassing at least 10 percent of the sample, seroprevalence rate less than 25 percent
▨—Zip codes with less than 10 percent of sample, numbers are too low to adequately assess seroprevalence

differences in needle sharing between blacks and whites, and only a small minority of those surveyed reported any regular attempt at cleaning their "works."

In addition to greater needle sharing among the HIV-positive PDAs, they were also more likely to visit a so-called "shooting gallery." In the last year, 39 (72 percent) of the HIV-infected PDAs had frequented such an establishment, while only 17 (13 percent) of the seronegative group had done so ($X^2 = 7.41$, $p < .01$). During the preceding five years, the frequency among the cases was the same (72 percent), and within the seronegative heroin users who shared needles, only 20 percent had visited a shooting gallery ($X^2 = 5.43$, $p < .05$). Blacks were more likely to visit a shooting gallery than were whites ($X^2 = 8.23$, $p < .01$).

Discussion

We found a 29 percent of antibodies to HIV among 184 PDAs in Baltimore in late 1986. Because our sample was not random, subjects may not be representative of the entire IV drug using population in the Baltimore area. However, there is no indication that individuals at increased risk of HIV infection either preferentially volunteered for or avoided this study. Among the prostitutes in this sample (N = 41), 34 percent were HIV antibody positive. Because the primary inclusion criteria for this study was drug abuse and not prostitution, the subjects manifesting a history of such behavior may not be representative of all prostitutes in the community. Furthermore, the fact that this subsample had a higher representation of male prostitutes than females may not be reflective of the Baltimore community overall, where females in this trade are believed to outnumber males by a ratio of approximately 3:1.[18] The Baltimore City Police Department suggests that at least 80 percent of female prostitutes are heavy drug users,[18] so there appears to be a distinct association between prostitution and drug abuse, at least for females. Consequently, the findings for the female prostitutes may have validity outside of this sample.

It is known that the risk profile for AIDS differs between whites and members of minority groups. Whereas the majority of whites with AIDS (78 percent) are homosexual, the majority of blacks (43 percent) are PDAs.[19] In the inner-city sections of large metropolitan areas, it has been reported that up to 85 percent of patients with AIDS are non-white, and that up to 70 percent have a history of intravenous drug abuse.[20] The picture in Baltimore is analogous, 80 percent of AIDS cases have occurred in blacks, and intravenous drug use is considered to be a principal risk factor (Branson, B., unpublished data). The difference in HIV infection rate between blacks and whites observed in this study corroborates this urban distribution.

As depicted in the figure, HIV seropositivity is not uniformly distributed throughout the Baltimore metropolitan area. It is not uniquely indigenous to either black neighborhoods or low-income communities, but it is most concentrated in predominantly black sections that lie in close proximity to center city.

That an enhanced risk of HIV infection is seen in black prostitutes is consistent with other reports, too. The CDC has previously reported an HIV infection rate in black female prostitutes 9 times greater than that in Hispanic women, 14 times greater than whites, and 22 times greater than in Asian and Native American women.[16] Differences in drug use were thought to account for these differences in infection rate.

Sharing of contaminated needles or "works" is considered a principal factor leading to exposure to and infection by the HIV agent in PDAs. Unfortunately, needle sharing is culturally ingrained and exceedingly common among PDAs regardless of the drugs being used. Ninety-four percent of the PDAs in this investigation had shared a needle on at least one occasion. Another report has indicated that over 68 percent of PDAs engage in needle sharing, and that they may do so in up to 40 percent of their drug-use episodes.[21] Even in California, where seroprevalence rates appear to be lower, it has been reported that approximately 80 percent of addicts seeking treatment have shared needles and other drug paraphernalia.[15] There is evidence that the greater the needle sharing, the more likely repeated exposure to the HIV will result in infection,[22] and this appears to be a feature of "shooting gallery" visitation. Shooting galleries are indiscriminate dens where addicts go to share or rent injection paraphernalia; they are analogous to gay bathhouses in the epidemiology of AIDS: both settings provide for the efficient exposure to the blood and body fluids of large numbers of contacts. Anecdotal reports suggest that the same needle can be used for up to 50 injections in such locations. The strong association found in this study between shooting galleries and HIV infection may be the preeminent factor defining risk in PDAs, and it may well be that the seroprevalence differences existing among ethnic groups and between geographic locales may be explained by the distribution and use of these facilities.

We conclude that HIV has appreciably penetrated Baltimore's addict community, including drug abusers who engage in prostitution to support their habit. The seroprevalence rate in black PDAs is approaching that observed in New York City. The overall rate in Baltimore (29 percent) approximates that of New York in 1979 (27 percent), where the rate subsequently jumped to 58 percent by 1984.[23] Based on the findings of this study, the development of effective intervention strat-

egies is urgently needed.

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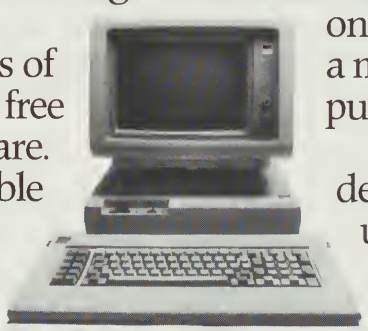
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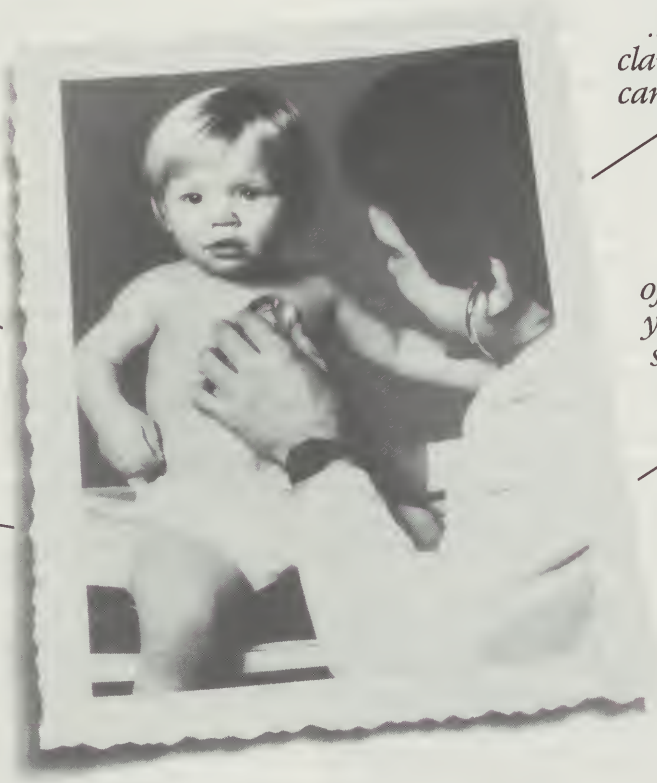
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Kawasaki Syndrome: HUS and HSP Complicating Its Course and Management

FRED J. HELDRICH MD, ROBERTO A. JODORKOVSKY MD, ALAN M. LAKE MD, and CAROLE A. PARNES MD

A patient with Kawasaki disease developed the complications of hemolytic uremic syndrome (HUS) and Henoch-Schonlein purpura (HSP). These complications, previously not reported, required adjustments in therapy for the patient.

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The hemolytic uremic syndrome (HUS) has rarely been reported as a complication of Kawasaki disease,[1] and to our knowledge features of Henoch-Schonlein Purpura (HSP) have never been reported to be associated with it. We recently encountered such a patient and were forced to alter our management of the disease until resolution of these complications.

Case Report

A three-year-old white female was admitted following an illness characterized by five days of fever; cervical lymphadenopathy; a generalized macular erythematous rash involving trunk, extremities, and perineum; red and parched lips; strawberry tongue; pharyngeal hyperemia; nonpurulent conjunctivitis; and right upper quadrant tenderness. Therapy with ampicillin on an ambulatory basis had been ineffective.

On admission, the child appeared acutely ill. Temperature was 40° Centigrade. Her pulse was 112 per minute, and respirations were 24 per minute. Her blood pressure was 95/50 mmHg. Additional findings were a left cervical node (3 × 5 cm) that was tender but nonfluctuant and a tender mass (4 × 7 cm) in the right upper quadrant. Initial laboratory studies revealed: hemoglobin 13.5 gm; hematocrit 38.8; WBC 30,300; 82% polymorphonuclear leukocytes; 11% bands; 5% lymphocytes; and 2% monocytes. Platelets 513,000 per mm^3; ESR 126 mm per hour; urea nitrogen 18 mg%; blood sugar 95 mg%. Serum glutamic oxaloacetic transaminase 120 IU and serum glutamic pyruvic transaminase 184 IU. ASO 1250 Todd units, C3 110 mg/dl (normal). Cultures of blood, urine, pharynx, and cervical node aspirate were negative.

A clinical diagnosis of Kawasaki syndrome with hydrops of the gallbladder was made. The patient was begun on aspirin, 100 mg/kg/24 hours, and nafcillin, 200 mg/kg/24 hours, was started pending results of cultures. Clinically, the patient deteriorated over the first 72 hours of hospitalization with increasing lethargy, more marked abdominal discomfort, ileus, persistence of fever, emesis, and passage of soft, bloody stools.

Because of the gastrointestinal bleeding, salicylates were discontinued. Serum salicylate level was 56 mEq/ml. Urine output diminished to 0.5 cc/kg/hr, requiring adjustment of the intravenous fluid administration. Urea nitrogen rose to 59 mg% with a serum creatinine of 3.8 mg/dl (Figure). Serum sodium 124 mEq/L, chloride 85 mEq/L, potassium 5.9 mEq/L, and hemoglobin 7.3 gm.

Burr cells were noted now on smear of peripheral blood, confirming microangiopathic hemolysis. The reticulocyte count was 0.3. Platelets 303,000. Urinalysis revealed 5-10 RBCs and numerous WBCs per high powered field. Serum bilirubin 12.6 mg% total with 12.5 mg% direct bilirubin. Abdominal sonography confirmed an enlarged thick-walled gallbladder and mild bilateral renal enlargement without evidence of obstruction. Coombs test, hepatitis B surface antigen, and leptospira agglutination titer were all negative. PT 13 seconds and

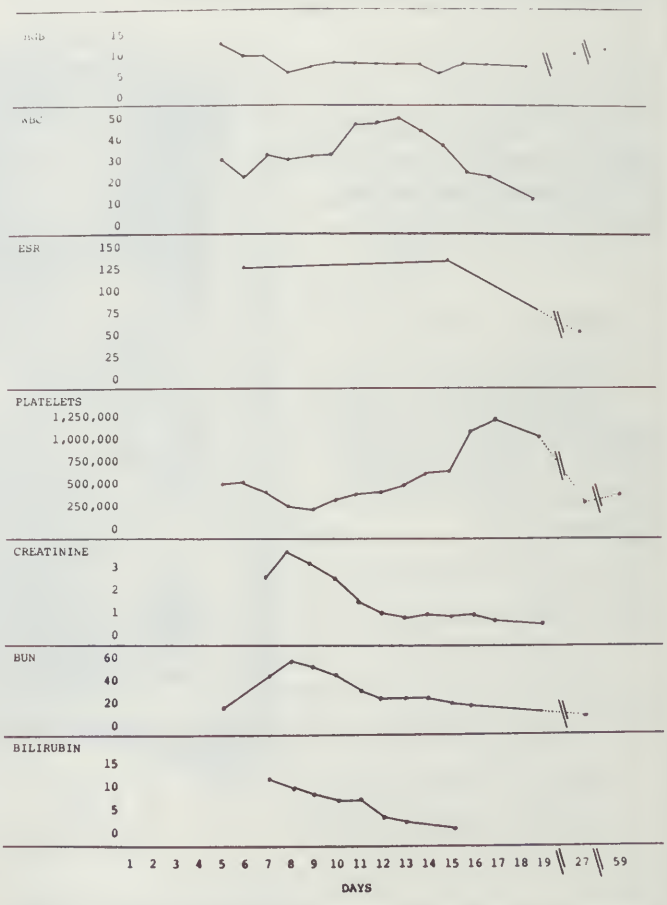


Figure: Laboratory Data in Relation to First Day of Symptoms

PTT 38 seconds. Serum NH_3 37 μmol/L, uric acid 10.3 mg/dl. Alpha-2 globulin 22.1%. IgE 12 μ/ml.

The child was given a transfusion of fresh frozen plasma on the third hospital day. Gastrointestinal bleeding ceased, and bowel motility improved with stools free of blood by the seventh hospital day. The rash seen on admission faded, however a symmetrical, macular, erythematous, petechial rash reappeared over the trunk and lower extremities, which was slightly pruritic.

Platelets had risen again to 519,000, and salicylate therapy with sucralfate was reinstituted. An echocardiogram and electrocardiogram were within normal limits. Temperature returned to normal by the eighth hospital day, and although the gallbladder was still palpable, there was reduction in abdominal discomfort. The patient's appetite on a low-fat diet was improving.

After the third day, the urine output gradually increased, and serum urea nitrogen, creatinine, and electrolytes slowly started to improve with complete normalization during the second week (Figure).

The patient was discharged on the fourteenth hospital day, and just prior to that time, periungual peeling of the skin was noted. She was followed on an ambulatory basis with eventual full recovery, including a normal echocardiogram performed two months after discharge.

Discussion

The diagnosis of Kawasaki disease in this patient is supported by the symptoms of five days of unremitting fever, lesions of the skin and mucous membranes, conjunctivitis, cervical lymphadenitis, and edema of hands and feet. Additional findings of leukocytosis, thrombocytosis, and obstructive jaundice with hydrops of the gallbladder also support the diagnosis.[2,3]

Three days after admission, the symptoms of hematemesis, melena, severe oliguria, and a macular rash that rapidly became purpuric, accompanied by hematuria, proteinuria, progressive azotemia, presence of Burr cells on smear, and a relative thrombocytopenia, suggested the diagnosis of HUS.[4,5] Reduction in the volume of intravenous fluids and modification of electrolyte composition of the fluid were required to prevent hypervolemia and electrolyte imbalance during the period of reduced urine output.

With onset of significant gastrointestinal hemorrhage, salicylates were discontinued because of its irritating effect on gastric mucosa and its interference with platelet aggregation. Initially, the platelet count was 513,000; however, concurrent with the onset of symptoms consistent with HUS, the platelet count fell to 263,000, only to rise again to levels >1,000,000 as the symptoms of HUS subsided. Concurrent with the secondary rise in platelets, salicylate therapy was reinstituted with the addition of sucralfate to reduce gastric irritation.

The purpuric rash that appeared in the second week of disease was typical of Henoch-Schonlein purpura in light of its symmetrical distribution predominantly over the lower extremities. The gastrointestinal symptoms this child developed (abdominal discomfort, vomiting, ileus, hematemesis, and melena) were also characteristic of HSP[6] as well as Kawasaki disease. HSP and HUS are diseases of unknown etiology, yet they have been reported to be associated with group A beta hemolytic streptococcal infection, *Mycoplasma pneumonia*, drugs, varicella, EB virus, allergens, and other viral infections. These three syndromes share a common postulated pathophysiology: vasculitis.[2,4–7]

The lesion in Kawasaki disease is characterized as a necrotizing arteritis with coronary arteries being principally involved, but there also may be involvement of large and medium-sized arteries in other locations.[2,3] In contrast, the vessels involved in HUS are small vessels, capillaries, and arterioles. Fibrinoid necrosis, inflammatory infiltrate, and IgA deposits affect with varying degrees the skin, gastrointestinal tract, CNS and kidneys. While multiple organ involvement occurs, the major vessels affected are the capillaries of glomeruli in the kidney.[4,5,8] Biopsies are obtained infrequently in either syndrome, so pathologic differentiation is not usually possible. Symptoms in each syndrome indicate multiple organ involvement,[3–6,8–10] but clinical presentation and associated laboratory abnormalities are the distinguishing diagnostic criteria used.

The gastrointestinal and urinary involvement, although almost universal to each of the three syndromes, usually exhibits different clinical responses. In Kawasaki disease the diarrhea that may occur is not bloody, and urinary findings are sterile pyuria and proteinuria.[2,3] Bloody diarrhea and hematuria, proteinuria, oliguria, or anuria are found in HUS.[4,5]

In HSP, the abdominal pain can be severe and acute. Vomiting, hematemesis, melena, and ileus are not infrequent. Rarely seen are severe complications like intussusception. The most common urinary abnormalities are proteinuria and hematuria; however, in a small percentage of cases, nephritis, the nephrotic syndrome, and progressive renal failure can occur.[6,7]

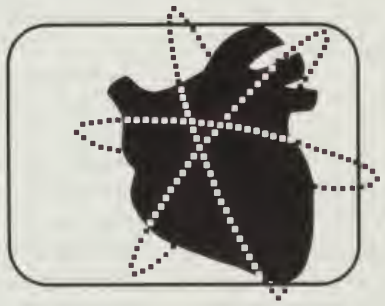
Kawasaki disease has not been reported to occur as a complicating feature of either HUS or HSP. Acute renal failure and HUS have been reported once as a complicating feature of Kawasaki syndrome.[1,11] In contrast, to the best of our knowledge, HSP never has been described to be associated with Kawasaki syndrome. Our patient is unique in that features characteristic of

the three syndromes were manifested with varying degrees of intensity within a two-week span, resulting in a need to modify such therapeutic interventions as salicylate administration and fluid management.

It is tempting to speculate that diseases of as yet unknown etiology like Kawasaki syndrome, HUS, and HSP may just represent vasculitities with clinical symptoms that are determined by both the etiologic agent(s) and the individual host's response.

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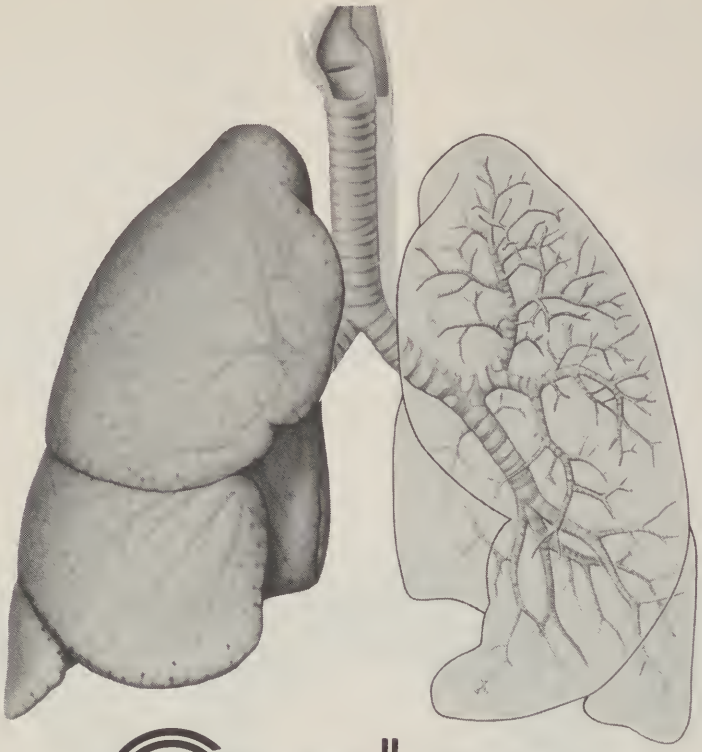
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Indications: Lower respiratory infections, including pneumonia, caused by susceptible strains of *Streptococcus pneumoniae, Haemophilus influenzae,* and *Streptococcus pyogenes* (group A β-hemolytic streptococci).

Contraindication:
Known allergy to cephalosporins.

Warnings:
CECLOR SHOULO BE ADMINISTEREO CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS. PENICILLINS ANO CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY. POSSIBLE REACTIONS INCLUDE ANAPHYLAXIS.

Administer cautiously to allergic patients.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

Precautions:
- Discontinue Ceclor in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of nonsusceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients.

Adverse Reactions: (percentage of patients)
Therapy-related adverse reactions are uncommon. Those reported include:
- Gastrointestinal (mostly diarrhea): 2.5%.
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, and serum-sickness-like reactions that have included erythema multiforme [rarely, Stevens-Johnson syndrome] or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever): 1.5%; usually subside within a few days after cessation of therapy. Serum-sickness-like reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Ceclor. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.
- Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.
- As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
- Rarely, reversible hyperactivity, nervousness, insomnia, confusion, hypertonia, dizziness, and somnolence have been reported.
- Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1%; and, rarely, thrombocytopenia.

Abnormalities in laboratory results of uncertain etiology
- Slight elevations in hepatic enzymes.
- Transient fluctuations in leukocyte count (especially in infants and children).
- Abnormal urinalysis; elevations in BUN or serum creatinine.
- Positive direct Coombs' test.
- False-positive tests for urinary glucose with Benedict's or Fehling's solution and Clinitest® tablets but not with Tes-Tape® (glucose enzymatic test strip, Lilly).

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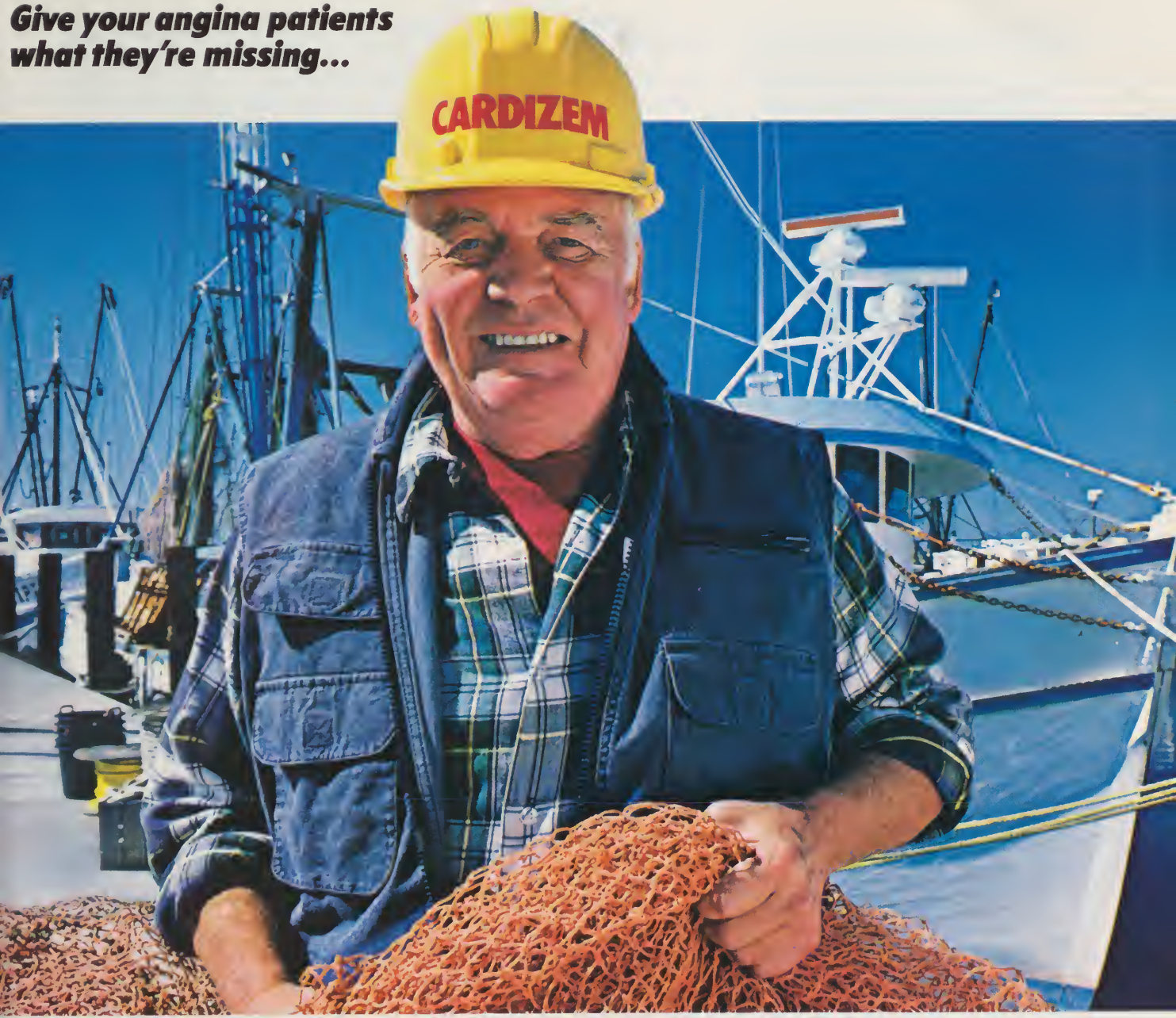
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- ***Proven efficacy when used alone in angina[1]***
- ***Compatible with other antianginals[2,3]****
- ***A safe choice for angina patients with coexisting hypertension, asthma, COPD, or PVD[4,5]***

****See Warnings and Precautions.***

Please see brief summary of prescribing information on the next page.



CARDIZEM® diltiazem HCl/Marion

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Brief Summary
Professional Use Information

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(diltiazem HCl)
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CONTRAINDICATIONS

CARDIZEM is contraindicated in (1) patients with sick sinus syndrome except in the presence of a functioning ventricular pacemaker, (2) patients with second- or third-degree AV block except in the presence of a functioning ventricular pacemaker, and (3) patients with hypotension (less than 90 mm Hg systolic).

WARNINGS

1. ***Cardiac Conduction.*** *CARDIZEM prolongs AV node refractory periods without significantly prolonging sinus node recovery time, except in patients with sick sinus syndrome. This effect may rarely result in abnormally slow heart rates (particularly in patients with sick sinus syndrome) or second- or third-degree AV block (six of 1,243 patients for 0.48%). Concomitant use of diltiazem with beta-blockers or digitalis may result in additive effects on cardiac conduction. A patient with Prinzmetal's angina developed periods of asystole (2 to 5 seconds) after a single dose of 60 mg of diltiazem.*
2. ***Congestive Heart Failure.*** *Although diltiazem has a negative inotropic effect in isolated animal tissue preparations, hemodynamic studies in humans with normal ventricular function have not shown a reduction in cardiac index nor consistent negative effects on contractility (dp/dt).*
   Experience with the use of CARDIZEM alone or in combination with beta-blockers in patients with impaired ventricular function is very limited. Caution should be exercised when using the drug in such patients.
3. ***Hypotension.*** *Decreases in blood pressure associated with CARDIZEM therapy may occasionally result in symptomatic hypotension.*
4. ***Acute Hepatic Injury.*** *In rare instances, significant elevations in enzymes such as alkaline phosphatase, CPK, LDH, SGOT, SGPT, and other symptoms consistent with acute hepatic injury have been noted. These reactions have been reversible upon discontinuation of drug therapy. The relationship to CARDIZEM is uncertain in most cases, but probable in some. (See PRECAUTIONS.)*

PRECAUTIONS

General. *CARDIZEM (diltiazem hydrochloride) is extensively metabolized by the liver and excreted by the kidneys and in bile. As with any new drug given over prolonged periods, laboratory parameters should be monitored at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic function. In subacute and chronic dog and rat studies designed to produce toxicity, high doses of diltiazem were associated with hepatic damage. In special subacute hepatic studies, oral doses of 125 mg/kg and higher in rats were associated with histological changes in the liver which were reversible when the drug was discontinued. In dogs, doses of 20 mg/kg were also associated with hepatic changes; however, these changes were reversible with continued dosing.*

Drug Interaction. *Pharmacologic studies indicate that there may be additive effects in prolonging AV conduction when using beta-blockers or digitalis concomitantly with CARDIZEM. (See WARNINGS.)*

Controlled and uncontrolled domestic studies suggest that concomitant use of CARDIZEM and beta-blockers or digitalis is usually well tolerated. Available data are not sufficient, however, to predict the effects of concomitant treatment, particularly in patients with left ventricular dysfunction or cardiac conduction abnormalities. In healthy volunteers, diltiazem has been shown to increase serum digoxin levels up to 20%.

Carcinogenesis, Mutagenesis, Impairment of Fertility. *A 24-month study in rats and a 21-month study in mice showed no evidence of carcinogenicity. There was also no mutagenic response in in vitro bacterial tests. No intrinsic effect on fertility was observed in rats.*

Pregnancy. *Category C. Reproduction studies have been conducted in mice, rats, and rabbits. Administration of doses ranging from five to ten times greater (on a mg/kg basis) than the daily recommended therapeutic dose has resulted in embryo and fetal lethality. These doses, in some studies, have been reported to cause skeletal abnormalities. In the perinatal/postnatal studies, there was some reduction in early individual pup weights and survival rates. There was an increased incidence of stillbirths at doses of 20 times the human dose or greater.*

There are no well-controlled studies in pregnant women; therefore, use CARDIZEM in pregnant women only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. *Diltiazem is excreted in human milk. One report suggests that concentrations in breast milk may approximate serum levels. If use of CARDIZEM is deemed essential, an alternative method of infant feeding should be instituted.*

Pediatric Use. *Safety and effectiveness in children have not been established.*

ADVERSE REACTIONS

Serious adverse reactions have been rare in studies carried out to date, but it should be recognized that patients with impaired ventricular function and cardiac conduction abnormalities have usually been excluded.

In domestic placebo-controlled trials, the incidence of adverse reactions reported during CARDIZEM therapy was not greater than that reported during placebo therapy.

The following represent occurrences observed in clinical studies which can be at least reasonably associated with the pharmacology of calcium influx inhibition. In many cases, the relationship to CARDIZEM has not been established. The most common occurrences as well as their frequency of presentation are: edema (2.4%), headache (2.1%), nausea (1.9%), dizziness (1.5%), rash (1.3%), asthenia (1.2%). In addition, the following events were reported infrequently (less than 1%):

Cardiovascular:	*Angina, arrhythmia, AV block (first degree), AV block (second or third degree — see conduction warning), bradycardia, congestive heart failure, flushing, hypotension, palpitations, syncope.*
Nervous System:	*Amnesia, gait abnormality, hallucinations, insomnia, nervousness, paresthesia, personality change, somnolence, tinnitus, tremor.*
Gastrointestinal:	*Anorexia, constipation, diarrhea, dysgeusia, dyspepsia, mild elevations of alkaline phosphatase, SGOT, SGPT, and LDH (see hepatic warnings), vomiting, weight increase.*
Dermatologic:	*Petechiae, pruritus, photosensitivity, urticaria.*
Other:	*Amblyopia, dyspnea, epistaxis, eye irritation, hyperglycemia, nasal congestion, nocturia, osteoarticular pain, polyuria, sexual difficulties.*

The following postmarketing events have been reported infrequently in patients receiving CARDIZEM: alopecia, gingival hyperplasia, erythema multiforme, and leukopenia. However, a definitive cause and effect between these events and CARDIZEM therapy is yet to be established.

Issued 9/86

See complete Professional Use Information before prescribing.

References: ***1.*** *Pepine CJ, Feldman RL, Hill JA, et al: Clinical outcome after treatment of rest angina with calcium blockers: Comparative experience during the initial year of therapy with diltiazem, nifedipine, and verapamil. Am Heart J 1983; 106(6):1341-1347.* ***2.*** *Shapiro W: Calcium channel blockers: Actions on the heart and uses in ischemic heart disease. Consultant 1984;24(Dec):150-159.* ***3.*** *Johnston DL, Lesoway R, Humen DP, et al: Clinical and hemodynamic evaluation of propranolol in combination with verapamil, nifedipine and diltiazem in exertional angina pectaris: A placebo-controlled, double-blind, randomized, crossover study. Am J Cardiol 1985;55:680-687.* ***4.*** *Cahn PF, Brounwald E: Chronic ischemic heart disease, in Braunwald E (ed): Heart Disease: A Textbook of Cardiovascular Medicine, ed 2. Philadelphia, WB Saunders Co, 1984, chap 39.* ***5.*** *Schroeder JS: Calcium and beta blockers in ischemic heart disease: When to use which. Mod Med 1982;50(Sept):94-116.*

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Acute Pancreatitis Caused by Biliary Ascariasis

HOWARD J. GOLDBERG MD and DAVID B. DOMAN MD

Ascariasis is said to be the most common helminthic infection worldwide: it affects one quarter of the world's population. Roundworms have a predilection for migrating into narrow orifices, which can lead to acute appendicitis, obstructive jaundice, cholecystitis, or pancreatitis as a result of luminal obstruction. In describing this case of acute pancreatitis we emphasize the valuable diagnostic and therapeutic role of ultrasonography and endoscopic retrograde cholangiopancreatography (ERCP).

Dr. Goldberg is Clinical Instructor of Medicine and Dr. Doman is Assistant Clinical Professor of Medicine at George Washington Univeristy School of Medicine, Washington, DC. They are in private practice in Wheaton, MD. **Reprints**: Howard Goldberg MD, 12012 Viers Mill Rd., Wheaton, MD 20906.

We present a case of acute pancreatitis caused by biliary ascariasis in which the diagnosis was suggested by a characteristic ultrasonographic appearance. ERCP confirmed the diagnosis and was therapeutic with the removal of a roundworm from the common bile duct.

Case Report

A 58-year-old Laotian woman who had immigrated to the United States three months earlier presented to the emergency room with acute onset of abdominal pain. The pain was epigastric, radiating to the back, and was associated with nausea and vomiting. There was no history of fever, shaking chills, jaundice, or weight loss. The patient admitted to a 20-year history of similar intermittent abdominal pain that always had resolved spontaneously. She denied a history of diarrhea, parasitic infestation, gallbladder disease, medication, alcohol use, or prior abdominal surgery.

Physical examination revealed an anicteric, afebrile, Oriental female in moderate distress from abdominal pain. Pertinent physical findings included right upper quadrant and epigastric tenderness to palpation with guarding but no rebound. There was no hepatosplenomegaly or mass, and the bowel sounds were hypoactive. Rectal exam demonstrated guiaic negative stool.

Laboratory studies included an amylase of 2,105 (normal 44 to 128 units per liter), lipase 75 (normal 4 to 24 units per deciliter). The hematocrit was 33 percent, and the white blood cell count was 9200 without a left shift or eosinophilia. Serum transaminases, alkaline phosphatase, and bilirubin were normal. Three subsequent stool specimens were negative for ova and parasites.

An abdominal ultrasound revealed a dilated, nonthickened gallbladder without stones. The common bile duct was dilated at 12 mm and contained a linear, echogenic image that did not shadow. There was a sonolucent inner tube within this linear echodensity (Figure 1). The pancreas appeared normal.

The patient's pancreatitis responded well to conservative measures with nasogastric suction, intravenous fluid, and analgesics. The amylase returned to normal, and the patient became pain free. On the fifth hospital day, an ERCP was performed to determine the cause of the patient's pancreatitis. The exam showed the tail of an *ascaris* worm projecting 1 cm out of the ampullary orifice (Figure 2). The worm was grasped with a snare passed through the scope biopsy channel and removed by withdrawing the endoscope. A 22 cm dead female *ascaris* worm was extracted (Figure 3).

Subsequent cholangiopancreatography demonstrated a pancreatic duct dilated along its entire length as well as a dilated common bile duct without additional filling

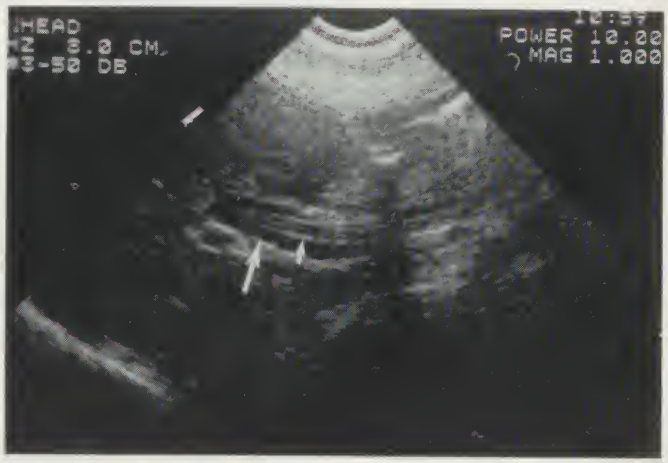


Figure 1. Longitudinal ultrasound scan demonstrating *ascaris* worm (short arrow) in dilated common bile duct (long arrow).

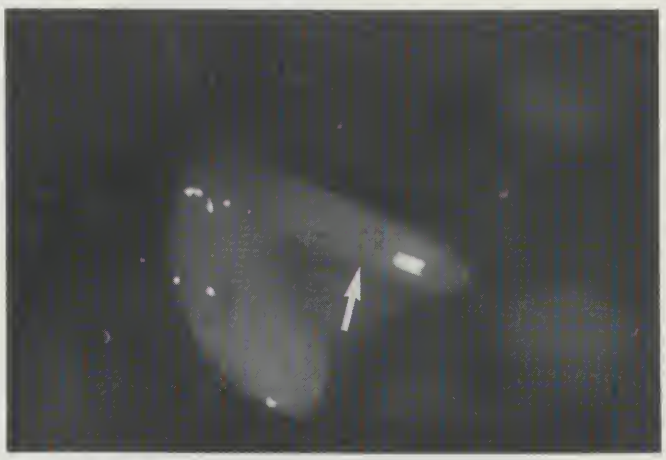


Figure 2. Tail of *ascaris* worm (arrow) protruding from ampulla of Vater.



Figure 3. Photograph of extracted *Ascaris* worm.

defects. The patient was given Mebendazol after the procedure (100 mg orally twice daily for three days). She remains asymptomatic three months later.

Discussion

Biliary ascariasis is rarely considered in the differential diagnosis of acute pancreatitis in the United States, although it represents a common etiology in endemic countries. In China, ascariasis has been claimed to be the most frequent cause of pancreatitis.[1]

The mechanism by which biliary ascariasis causes pancreatitis is unclear. Presumably, mechanical obstruction of the pancreatic duct is caused by a roundworm migrating through the ampulla. This leads to bile regurgitation and introduction of enteric organisms into the pancreatic duct.[2]

The clinical picture of *ascaris*-induced, acute pancreatitis is no way diagnostic of the etiology of the attack. Typically, the patient, an adult female, presents with severe epigastric abdominal pain radiating to the back, nausea, vomiting, and hyperamylasemia. Nonspecific elevation of liver chemistries can be seen, although eosinophilia is rare. Jaundice is uncommon, occurring in only 10 to 20 percent of patients.[3]

The usual course of the pancreatitis is gradual recovery with conservative measures including nasogastric suction, intravenous hydration, and analgesics. However, the pancreatitis can worsen with superimposed cholangitis resulting in death.[4] Consequently, surgery has been recommended for unrelenting pancreatitis with complications.

The majority of patients can be treated with antihelminthic drugs after the acute pancreatitis has resolved. However, roundworms are resistant to such drugs while in the bile duct and are amenable to pharmacologic therapy only after migrating into the duodenum.

In the past, viewing roundworms in the biliary tract has been difficult due to the inability to opacify the biliary tree with conventional radiography. The advent of ultrasonography has provided an accurate noninvasive test to diagnose biliary ascariasis.[5] Roundworms can commonly be seen in the gallbladder and bile ducts as vermiform, nonshadowing echodensities, often with an echolucent inner tube.[6] The common bile duct and pancreatic duct are often dilated as a consequence of mechanical obstruction.

Whereas real-time ultrasonography is the logical choice for initial diagnosis, endoscopic retrograde cholangiopancreatography represents an important diagnostic and therapeutic advance. At ERCP, a roundworm often can be seen protruding from the ampulla, conclusive evidence of the cause of pancreatitis.[7] Mechanical removal of the worm can be accomplished by grasping forceps or with the use of a snare as we did with our patient. This can be especially important when worms remain localized to the biliary tree.

In summary, our patient presented with a typical attack of pancreatitis in which ultrasonography was extremely useful in suggesting the correct diagnosis. Although the patient's symptoms resolved with medical therapy, at ERCP a roundworm was found impacted in the ampulla. Presumably, the roundworm caused the patient's recurrent symptoms by migrating in and out of the ampulla. Endoscopic removal of the roundworm and subsequent antihelminthic therapy has led to complete resolution of her symptoms.

This case illustrates that the diagnosis of *ascaris*-induced pancreatitis should be strongly considered in any patient presenting with acute pancreatitis who has resided in an endemic region.

Acknowledgment: The authors thank the radiology staff at Suburban Hospital, Bethesda, MD for their assistance.

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ad·dict \ ə-'dikt \ *vb* **1 :** to devote or surrender (oneself) to something habitually or excessively **2 :** to cause (a person) to become physiologically dependent upon a drug

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Discipline Commission Action

In the Matter of
Robert Cecil Brown MD
Before the
Commission on Medical Discipline

Order Terminating Probation and Reinstating License

By Order dated April 30, 1985, (the "1985 Order") the Commission on Medical Discipline (the "Commission") found Robert C. Brown MD (the "Respondent") guilty of: (1) Is disciplined by a licensing or disciplinary authority for an act that would be grounds for disciplinary action under this Section; (2) fraudulently or deceptively uses a license; (3) is guilty of immoral conduct in the practice of medicine; (4) is professionally incompetent; and (6) is convicted of and pleads guilty with respect to a crime involving moral turpitude, pursuant to Maryland Annotated Code, Section 14-504(22) of the Health Occupations Article, and suspended the medical license of Respondent subject to certain indefinite conditions (the "Conditions of Probation"). The Order further provided that if Respondent complied satisfactorily with the Conditions of Probation, the Commission would entertain a petition for termination of Respondent's probationary status and reinstatement of his medical license without any conditions or restrictions. On March 18, 1987, Respondent petitioned the Commission for reinstatement of his license to practice medicine in Maryland without any conditions or restrictions. At its meeting on April 7, 1987, the Commission reviewed Respondent's petition for reinstatement. Based on its review of the petition, the Commission determined that Respondent had fulfilled the Conditions of Probation contained in the 1985 Order.

Findings of Fact

The Commission finds that Respondent has satisfactorily complied with all the Conditions of Probation imposed by the Commission's 1985 Order.

Conclusions of Law

The Commission concludes, as a matter of law, that it is appropriate to terminate Respondent's Conditions of Probation and to reinstate his license without any condition or restriction.

Order

Upon the foregoing Findings of Fact and Conclusions of Law, it is this 7th day of April 1987 by a unanimous vote of a quorum of the Commission:

ORDERED that effective as of the date of this Order, the Conditions of Probation imposed upon Respondent's practice of medicine by the Commission's 1985 Order are hereby TERMINATED and of no further force and effect; and be it further

ORDERED that Respondent's license to practice medicine in the State of Maryland be REINSTATED without any condition or restriction whatsoever.

HILARY T. O'HERLIHY **MD, Chairman**
Commission on Medical Discipline

• • •

In the Matter of
Kripa S. Kashyap MD
Before the
Commission on Medical Discipline

Findings of Fact, Conclusions of Law, and Order

Based on information coming to its attention, the Commission on Medical Discipline of Maryland ("the Commission") conducted an investigation and subsequently determined to charge Kripa S. Kashyap MD ("Respondent") with violation of §14-504(6), and (25) of the Maryland Medical Practice Act, (the "Act") Health Occupations Article §14-101 *et seq.*, Annotated Code of Maryland, which provides:

> Subject to the hearing provision of §14-505 of this subtitle, the Commissions on the affirmative vote of a majority of its full authorized membership, may reprimand any licensee, place any licensee on probation, or suspend or revoke a license if the licensee:
>
> (6) Is convicted of or pleads guilty or nolo contendere with respect to a crime involving moral turpitude whether or not any appeal or other proceeding is pending to have the conviction or plea set aside;
>
> (25) Willfully submits false statements to collect fees for which services are not provided;

Respondent was notified of the charges by letter dated April 21, 1987. A hearing was scheduled for May 28, 1987; on April 30, 1987, a prehearing conference was held. As a result of discussions and negotiations, Respondent agreed to enter into the following Consent Order.

Findings of Fact

Based on information in its files and otherwise made known to it, the Commission finds:

1. That Respondent, is a physician licensed and practicing in Maryland both currently and at all times material to the allegations relating to this matter;

2. That on January 8, 1987, Respondent pled guilty to and was convicted of one count of violating Article 27 §§230B, 230C, and 230D of the Annotated Code of Maryland ("Medical Fraud") in the Circuit Court for Baltimore City, Criminal Indictment Number 28636501;

3. That the charges to which Respondent pled guilty were based on his submitting fraudulent invoices and obtaining reimbursement from the Maryland Medical Assistance Program ("Medicaid") for physician services

On instruction of the Council of the Medical and Chirurgical Faculty of the State of Maryland, "Findings of Fact, Conclusions of Law, and Order" will be published in the Maryland Medical Journal.

not received by his patients.

4. That as a result of the guilty plea and conviction, Respondent received the following sentence from the Circuit Court for Baltimore City: one year in jail (suspended), five years supervised probation; restitution to Medicaid in the amount of $146,391 and a fine of $10,000.

Conclusions of Law

Based on the foregoing Findings of Facts, the Commission on Medical Discipline, by unanimous vote of a quorum of its members, concludes as a matter of law that Respondent violated §14-504(6), and (25) of the Maryland Medical Practice Act, Health Occupations Article, Annotated Code of Maryland, and finds respondent GUILTY of those charges.

Order

Based on the foregoing Findings of Fact and Conclusions of Law, it is this 5th day of May 1987, by unanimous vote of a quorum of the members of the Commission on Medical Discipline,

ORDERED that the license of Respondent, Kripa S. Kashyap MD, an individual licensed to practice medicine in the State of Maryland, is hereby SUSPENDED retroactively to April 30, 1987; and be it further

ORDERED that the suspension of Respondent's license shall be STAYED after May 13, 1987 and Respondent shall be placed on PROBATION subject to the following terms and conditions:

1. That Respondent shall meet any conditions imposed by the Circuit Court for Baltimore City in the disposition of the criminal matters that formed the subject of this prosecution;

2. That Respondent shall perform 100 hours of community service on a project approved by the Commission;

3. That Respondent shall not engage in activities of the type that led to his criminal conviction;

4. That Respondent shall not violate any other provision of the Act; and

5. That Respondent shall practice fully in accordance with those standards expected of a competent practitioner of medicine in the State of Maryland; and be it further

ORDERED that after the expiration of five (5) years from the date of this Order, the Commission will entertain a petition for termination of Respondent's probationary status and for restoration of his license to practice medicine without condition or restriction, upon Respondent's demonstrating to the satisfaction of the Commission that he has complied with the terms and conditions of his probation. If the Commission determines that he has not complied with the terms and conditions of his probation, the Commission may modify one or more of the conditions of his probation; and be it further

ORDERED that if Respondent violates any of the foregoing conditions of probation, the stay on the suspension may be lifted and the Commission, after notification, a hearing, and determination of violation, may impose any additional disciplinary sanctions it deems appropriate.

HILARY T. O'HERLIHY **MD, Chairman**
Commission on Medical Discipline

Consent

By this Consent, I hereby admit the truth of the above findings of Fact and accept and submit to the foregoing Order and its conditions. I have read and acknowledge the validity of the Order as if made after a hearing in which I would have had the right to counsel, to confront witnesses, to give testimony, to call witnesses on my behalf, and to all other substantive and procedural protections provided by law. I also recognize that I am waiving my right to appeal any adverse ruling of the Commission that might have followed any such hearing. By this Consent, I understand that I am waiving all such rights and acknowledge that by my failure to abide by the conditions of the Order, I may suffer disciplinary action against my license to practice medicine in the State of Maryland. I sign this Consent without reservation and after conferring with counsel. I fully understand its meaning.

KRIPA S. KASHYAP **MD**

• • •

In the Matter of Bruce E. Weneck MD Before the Commission on Medical Discipline

Findings of Fact, Conclusions of Law, and Order

Based on information coming to its attention, the Commission on Medical Discipline of Maryland ("the Commission") conducted an investigation and subsequently determined to charge Bruce E. Weneck MD ("Respondent") with violation of §14-504(6), (13), and (25) of the Maryland Medical Practice Act, (the "Act") Health Occupations Article §14-101 *et seq.*, Annotated Code of Maryland, which provide:

> Subject to the hearing provision of §14-505 of this subtitle, the Commissions on the affirmative vote of a majority of its full authorized membership, may reprimand any licensee, place any licensee on probation, or suspend or revoke a license if the licensee:
>
> (6) Is convicted of or pleads guilty or nolo contendere with respect to a crime involving moral turpitude whether or not any appeal or other proceeding is pending to have the conviction or plea set aside;
>
> (13) Is guilty of immoral conduct in the practice of medicine;
>
> (25) Willfully submits false statements to collect fees for which services are not provided;

Respondent was notified of the charges by letter dated March 11, 1987. A hearing was scheduled for May 19, 1987. On April 16, 1987, a prehearing conference was held. As a result of discussions and negotiations at the prehearing conference, Respondent agreed to enter into the following Consent Order.

Findings of Fact

Based on the information in its files and otherwise made known to it the Commission finds:

1. That Respondent, is a physician licensed and practicing in Maryland both currently and at all times material to the allegations relating to this matter;

2. That on August 27, 1986, Respondent pled guilty to one count of violating Article 27 §230C of the Annotated Code of Maryland ("Medical Fraud") and one count of violating of Article 27, §27 or of the Annotated Code of Maryland ("Obstruction of Justice") in the Circuit Court for Baltimore City, Criminal Indictment Numbers 18612701 and 18605501;

3. That the charges to which Respondent pled guilty were based on his submitting fraudulent invoices and obtaining reimbursement from the Maryland Medical Assistance Program ("Medicaid") for physician services not received by his patients and for altering patient records in an attempt to frustrate investigations being carried out by various investigating units within the state government.

4. That as a result of the guilty pleas, Respondent received the following sentence from the Circuit Court for Baltimore City; one year in prison (six months suspended and 60 days served), two years supervised probation; restitution in the amount of $37,000; and a fine of $10,000. The Court also imposed 500 hours of community service.

Conclusions of Law

Based upon the foregoing Findings of Facts, the Commission on Medical Discipline, by unanimous vote of a quorum of its members, concludes as a matter of law that Respondent violated §14-504(6), (13), and (25) of the Maryland Medical Practice Act, Health Occupations Article, Annotated Code of Maryland, and finds Respondent GUILTY of that charge.

Order

Based on the foregoing Findings of Fact and Conclusions of Law, it is this 5th day of May 1987, by unanimous vote of a quorum of the members of the Commission on Medical Discipline,

ORDERED that the license of Respondent, Bruce E. Weneck MD, an individual licensed to practice medicine in the State of Maryland, is hereby REVOKED; and be it further

ORDERED that the revocation of Respondent's license shall be immediately STAYED and Respondent placed on PROBATION subject to the following terms and conditions:

1. That Respondent shall meet any conditions imposed by the Circuit Court for Baltimore City in the disposition of the criminal matters that formed the subject of this prosecution;

2. That Respondent shall complete 100 hours of community service in addition to the 500 hours of community service imposed by the Court. The 100 hours of community service shall begin only after the 500 hours have been completed. The 100 hours of community service shall be completed at the Washington County Department of Social Services and Melissa A. Cline, LCSW, shall supervise the service and report to the Commission when service is completed. The 100 hours of community service shall be completed no later than November 1989;

3. That Respondent shall not engage in activities of the type that led to his criminal conviction;

4. That Respondent shall not violate any other provisions of the Act; and

5. That Respondent shall practice fully in accordance with those standards expected of a competent practitioner of medicine in the State of Maryland; and be it further

ORDERED that after the expiration of five (5) years from the date of this Order, the Commission will entertain a petition for termination of Respondent's probationary status and for restoration of his license to practice medicine without condition or restriction, upon Respondent's demonstrating to the satisfaction of the Commission that he has complied with the terms and conditions of his probation. If the Commission determines that he has not complied with the terms and conditions of his probation, the Commission may modify one or more of the conditions of his probation; and be it further

ORDERED that if Respondent violates any of the foregoing conditions of probation, the stay on the revocation may be lifted and the Commission, after notification, a hearing, and determination of violation, may impose any additional disciplinary sanctions it deems appropriate.

HILARY T. O'HERLIHY **MD, Chairman**
Commission on Medical Discipline

Consent

By this Consent, I hereby admit the truth of the above Findings of Fact and accept and submit to the foregoing Order and its conditions. I have read and acknowledge the validity of the Order as if made after a hearing in which I would have had the right to counsel, to confront witnesses, to give testimony, to call witnesses on my behalf, and to all other substantive and procedural protections provided by law. I also recognize that I am waiving my right to appeal any adverse ruling of the Commission that might have followed any such

hearing. By this Consent, I understand that I am waiving all such rights and acknowledge that by my failure to abide by the conditions of the Order, I may suffer disciplinary action against my license to practice medicine in the State of Maryland. I sign this Consent without reservation and after conferring with counsel. I fully understand its meaning.

BRUCE E. WENECK **MD**

Area meetings and course announcements are listed each month under *Doctors Take Note*

Look for *Med-Chi Meetings* schedule in each issue of *MMJ*.

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Baltimore County Medical Association

Ms. Neilson P. Andrews has been appointed Executive Director of the Baltimore County Medical Association. The Baltimore County Medical Association, a component of Med-Chi, is the professional organization for over 1,000 physicians in Baltimore County.

Prior to joining BCMA, Ms. Andrews was the Development Associate for the Public Relations and Development Office of the Franklin Square Hospital Center. She received her B.A. from Mary Baldwin College and a Certificate of Professional Advancement from Goucher College.



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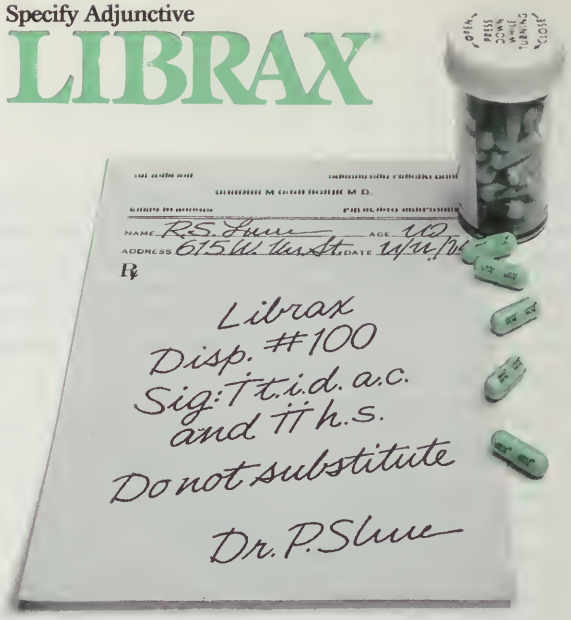
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Sep 25 Obstetrics for the 90s. Fee: $25; 5.75 AMA Cat I credits.

Oct 1 Deadline Call for Papers: Fourth National Traumatic Brain Injury Symposium, "The Neglected Disease," sponsored by the Speech-Communications Disorders Program, MIEMSS, Shock Trauma Center. **Symposium will be March 24–25, 1988.** Info: Roberta Schwartz 301-328-6101.

Oct 9 Current Concepts in Ophthalmology: Seventh Annual Clinical Conference, Hyatt Regency, Baltimore. A memorial lecture honoring Lois A. Young-Thomas MD will be included in the program. Fee: $60; 6 AMA Cat I credits.

Oct 9–10 Cardiology for the Future: A View from the University of Maryland, Sheraton Inner Harbor Hotel, Baltimore. Fee and credits TBA.

Oct 14 Topics in Diagnostic Radiology. Fee: $25; AMA Cat I credits TBA.

Nov 6–7 Medical Perioperative Management, Harbor Court Hotel, Baltimore. Fee: TBA; 11 AMA Cat I credits.

Nov 18 Cancer Management. Fee: $25; AMA Cat 1 credit TBA.

Nov 28, 1987, Jan 16, and Feb 27, 1988 Neurology and Music at Maryland. Fee: $150; 9.75 AMA Cat I credits. Info: Dr. Kenneth Johnson, Department of Neurology, University of Maryland Hospital, 22 S. Greene St., Baltimore, MD 21201 (301-328-6484).

Dec 11 Diabetes Update. Fee: $25; AMA Cat I credit TBA.

Visiting Professor Program—Director of speakers and topics available for area hospitals and other health care organizations. An administrative fee is charged. Info: 301-328-3956.

Visiting Practitioner Preceptorships—Opportunity for physicians to participate in clinical situations in the University of Maryland Medical Systems. Requires approval from clinical department/division heads. Direct inquiries to CME. Hour-for-hour AMA Cat I credits.

Departmental Rounds and Conferences—September through June—Hands-on opportunities for practicing physicians including weekly lectures and discussions by sponsoring departments/divisions. Hour-for-hour AMA Cat I credits. Brochure available.

• • •

Miscellaneous Meetings

Sep 28–30 Community Re-Entry Following Head Injury—Return to Work, School, Family, and Social Life for Adults and Children, sponsored by the Rehabilitation Institute of Pittsburgh, at the Vista Hotel, Pittsburgh, PA. Info: Training Dept., Rehabilitation Institute of Pittsburgh, 6301 Northumberland St., Pittsburgh, PA 15217 (412-521-9000).

Oct 10–11 Regional Review Course in Hand Surgery to be held in Philadelphia, PA. Credits: 12 hrs; info: T. Harrington, American Society for Surgery of the Hand, 3025 S. Parker Rd., Ste. 65, Aurora, CO 80014 (303-755-4588).

Oct 19–21 NIH Consensus Development Conference: Geriatric Assessment Methods for Clinical Decision Making, Masur Auditorium, Warren Grant Magnuson Clinical Center, NIH, Bethesda. Info: M. Bernstein, Prospect Assoc., St. 500, 1801 Rockville Pike, Rockville, MD 20852 (301-468-6555).

Oct 22–24 New Techniques and Concepts in Cardiology, Washington, DC. Fee: $350, ACC members; $395, nonmembers; $175, residents, fellows in training, nurses and technicians. 16 Cat I credits. Info: American College of Cardiology 800-253-4636, 301-897-5400, ext 226 (MD and AK).

Oct 26–28 NIH Consensus Development Conference: Magnetic Resonance Imaging, Masur Auditorium, Warren Grant Magnuson Clinical Center, NIH, Bethesda. Info: S. Feldman, Prospect Assoc., St. 500, 1801 Rockville Pike, Rockville, MD 20852 (301-468-6555).

Nov 19–21 Tenth National Trauma Symposium: Challenges of the '90s, Baltimore Convention Center. Info: P. McAllister, MIEMSS, 22 S. Greene St., Baltimore, MD 21201 (301-328-2399).

• • •

The Johns Hopkins Medical Institutions

All courses at the Turner Auditorium Building unless otherwise indicated. Sponsored Continued Education Activities for 1987–88. Info: Office of Continuing Education, 720 Rutland Ave., Turner Auditorium, Baltimore, MD 21205 (301-955-5880).

Oct 5–7, Mar 7–9, June 20–22 Advanced Pediatric Life Support Course. Fee: $415; 20 AMA Cat I credits. Info: P. Macedonia 301-955-6085.

Oct 7–10 Triennial Meeting of the International Society for the Study of Brain Edema, Sheraton Inner Harbor, Baltimore. Fee: $100; AMA Cat I credits to be awarded. Info: D. Heydinger 301-955-6046.

Oct 9 Update on Eating Disorders. Fee: $110 physicians, $80 allied health professionals; 7.5 AMA Cat I credits and 7.5 Cat A for psychologists. Info: J. Ryan.

Oct 12–14 Laser Angioplasty and Interventional Radiology. Fee: $400 physicians, $200 resi-

dents, nurses, techs; 25 AMA Cat I credits. Info: C. Kearney 301-955-3168.

Oct 15–17 Thirteenth Annual Topics in Gastroenterology and Liver Disease. Fee: $340 physicians, $170 residents and fellows (with letter verifying status); 20.5 AMA Cat I credits. Info: J. Ryan, 301-955-6046.

Oct 23 Diabetic Retinopathy in 1987. Fee: $175, $90 (those in training); 8 AMA Cat I Credits. Info: D. Heydinger 301-955-6046.

Oct 26–27 Noise-Induced Injury and Ototoxicity: An Update, Department of Environmental Health Sciences, The Johns Hopkins University School of Hygiene and Public Health. Info: C. Walsh 301-955-2609.

Oct 26–30 Twenty-ninth Annual Emil Novak Memorial Course: Gynecology, Gynecologic Pathology, Endocrinology, and Obstetrics. Fee: $550 physicians, $400 residents; 44 AMA Cat I credits. Info: C. Kearney 301-955-3168.

Oct 31–Nov 1 Hemodynamic Monitoring/Patient Care and Pulmonary Artery Catheterization. Fee: $375; 14 AMA Cat I credits. Info: J. Ryan 301-955-6046.

Nov 4–5 Progress in *in vitro* Toxicology, sponsored by The Johns Hopkins Center for Alternatives to Animal Testing. Fee: Before Oct 2—$225, thereafter—$275; 15 AMA Cat I credits, 1.5 CEU. Info: J. Ryan 301-955-6046.

Nov 7–8 Annual Meeting and Scientific Symposium of the Johns Hopkins School of Hygiene and Public Health, Society of Alumni: **Hard Choices in Public Health: AIDS, Aging, Biotechnology.** Info: Society of Alumni Office, JHU School of Hygiene and Public Health, 615 N. Wolfe St., Baltimore, MD 21205 (301-955-3795).

Nov 9–14 First International Congress on Oral Cancer and Jaw Tumors, co-sponsored by the World Health Organization and the International Union Against Cancer; organized by the Division of Oral and Maxillofacial Surgery, The Johns Hopkins Medical Institutions in conjunction with the Department of Oral and Maxillofacial Surgery of the National University of Singapore. Congress Coordinator: Dr. Robert W. VanBoven, The Johns Hopkins Medical Institutions 301-955-2083 or 955-6664.

Nov 20–22 Update in Pediatric Infectious Diseases, sponsored by The Johns Hopkins University School of Medicine, The Maryland Chapter of the American Academy of Pediatrics, and The University of Maryland School of Medicine; to be held at the Annapolis Hotel in Annapolis. Fee: member (AAP) $125, nonmember $150; 11 Cat I AMA credits, PREP credits available. Info: P. Macedonia 301-955-6085.

Dec 7–9 International Neuroradiology: Current Practices and Technique. Fee: $500 physicians, $400 technicians; 22.5 AMA Cat I credits. Info: C. Kearney 301-955-3168.

Johns Hopkins Medical Grand Rounds: audiocassettes, slides, and booklet. 30 topics and 40 AMA Cat I credits/year. Contact 301-955-3988, Office of Continuing Education, 720 Rutland Ave., Baltimore, MD 21205.

Ophthalmic Electrophysiology Technician Training Course (on-going 1-week course by appointment), The Wilmer Eye Institute, Baltimore. Info: C. M. Kearney.

The Department of Radiology and Radiological Sciences offers several courses in abdominal and obstetrical ultrasound: Courses scheduled 1/12/87—12/7/87. Info: J. Mosmiller 301-955-8450.

Basic Practicum, Nov 16–20. Fee: $460; 40 AMA Cat I credits.

Advance Practicum in Ultrasound. Dec 7–11. Fee: $460; 40 AMA Cat I credits.

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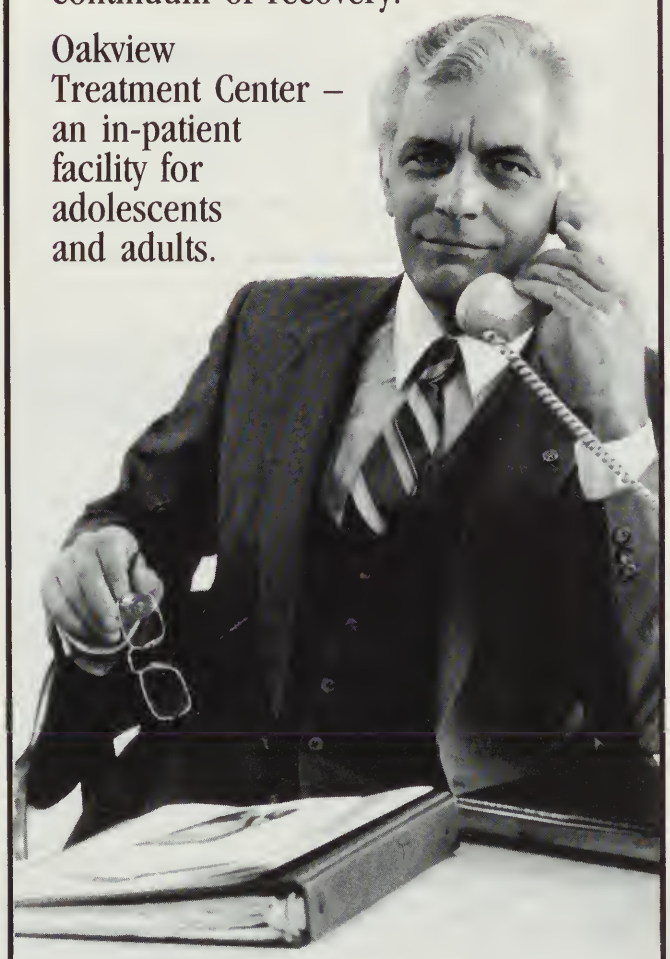
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CARAFATE® (sucralfate)

BRIEF SUMMARY

CONTRAINDICATIONS
There are no known contraindications to the use of sucralfate.

PRECAUTIONS
Duodenal ulcer is a chronic, recurrent disease. While short-term treatment with sucralfate can result in complete healing of the ulcer, a successful course of treatment with sucralfate should not be expected to alter the post-healing frequency or severity of duodenal ulceration.

Drug Interactions: Animal studies have shown that the simultaneous administration of CARAFATE with tetracycline, phenytoin, or cimetidine will result in a statistically significant reduction in the bioavailability of these agents. This interaction appears to be nonsystemic in origin, presumably resulting from these agents being bound by CARAFATE in the gastrointestinal tract. The bioavailability of these agents may be restored simply by separating the administration of these agents from that of CARAFATE by two hours. The clinical significance of these animal studies is yet to be defined.

Carcinogenesis, Mutagenesis, Impairment of Fertility: No evidence of drug-related tumorigenicity was found in chronic oral toxicity studies of 24 months' duration conducted in mice and rats at doses up to 1 gm/kg (12 times the human dose). A reproduction study in rats at doses up to 38 times the human dose did not reveal any indication of fertility impairment. Mutagenicity studies have not been conducted.

Pregnancy: Pregnancy Category B. Teratogenicity studies have been performed in mice, rats, and rabbits at doses up to 50 times the human dose and have revealed no evidence of harm to the fetus due to sucralfate. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when sucralfate is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS
Adverse reactions to sucralfate in clinical trials were minor and only rarely led to discontinuation of the drug. In studies involving over 2,500 patients, adverse effects were reported in 121 (4.7%). Constipation was the most frequent complaint (2.2%). Other adverse effects, reported in no more than one of every 350 patients, were diarrhea, nausea, gastric discomfort, indigestion, dry mouth, rash, pruritus, back pain, dizziness, sleepiness, and vertigo.

DOSAGE AND ADMINISTRATION
The recommended adult oral dosage for duodenal ulcer is 1 gm four times a day on an empty stomach.

Antacids may be prescribed as needed for relief of pain but should not be taken within one-half hour before or after sucralfate.

While healing with sucralfate may occur during the first week or two, treatment should be continued for 4 to 8 weeks unless healing has been demonstrated by x-ray or endoscopic examination.

HOW SUPPLIED
CARAFATE (sucralfate) 1-gm pink tablets are supplied in bottles of 100 and in Unit Dose Identification Paks of 100. The tablets are embossed with MARION/1712. Issued 3/84

References:

1. Korman MG, Shaw RG, Hansky J, et al: *Gastroenterology* 80:1451-1453, 1981.
2. Korman MG, Hansky J, Merrett AC, et al: *Dig Dis Sci* 27:712-715, 1982.
3. Brandstaetter G, Kratochvil P: *Am J Med* 79(suppl 2C):36-38, 1985.
4. Marks IN, Wright JP, Gilinsky NH, et al: *J Clin Gastroenterol* 8:419-423, 1986.
5. Lam SK, Hui WM, Lau WY, et al: *Gastroenterology* 92:1193-1201, 1987.

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(at four weeks of therapy)[5]

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All patients	79.4%
Smokers	81.6%*
Cimetidine:	
All patients	76.3%
Smokers	62.5%

*Significantly greater than cimetidine smoker group ($P<.05$).

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No estrogen proven safer

PREMARIN is the most extensively tested estrogen, with an unsurpassed record of long-term safety.
And clinical evidence shows a significantly reduced risk of endometrial hyperplasia when cycled with a progestin.[2]

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(conjugated estrogens tablets)

Most trusted for more reasons

*PREMARIN is indicated for moderate-to-severe vasomotor symptoms.

Please see following page for brief summary of prescribing information.

For moderate-to-severe vasomotor symptoms and for osteoporosis

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(conjugated estrogens tablets)



0.3 mg 0.625 mg 0.9 mg 1.25 mg 2.5 mg

The appearance of these tablets is a trademark of Ayerst Laboratories.

For atrophic vaginitis

PREMARIN®
(conjugated estrogens)

Vaginal Cream

0.625 mg/g



BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION AND PATIENT INFORMATION, SEE PACKAGE CIRCULARS.)*

PREMARIN® Brand of conjugated estrogens tablets, USP
PREMARIN® Brand of conjugated estrogens Vaginal Cream, In a nonliquefying base

1. ESTROGENS HAVE BEEN REPORTED TO INCREASE THE RISK OF ENDOMETRIAL CARCINOMA.
Three independent, case-controlled studies have reported an increased risk of endometrial cancer in postmenopausal women exposed to exogenous estrogens for more than one year. This risk was independent of the other known risk factors for endometrial cancer. These studies are further supported by the finding that incidence rates of endometrial cancer have increased sharply since 1969 in eight different areas of the United States with population-based cancer reporting systems, an increase which may be related to the rapidly expanding use of estrogens during the last decade. The three case-controlled studies reported that the risk of endometrial cancer in estrogen users was about 4.5 to 13.9 times greater than in nonusers. The risk appears to depend on both duration of treatment and on estrogen dose. In view of these findings, when estrogens are used for the treatment of menopausal symptoms, the lowest dose that will control symptoms should be utilized and medication should be discontinued as soon as possible. When prolonged treatment is medically indicated, the patient should be reassessed on at least a semi-annual basis to determine the need for continued therapy. Although the evidence must be considered preliminary, one study suggests that cyclic administration of low doses of estrogen may carry less risk than continuous administration; it therefore appears prudent to utilize such a regimen. Close clinical surveillance of all women taking estrogens is important. In all cases of undiagnosed persistent or recurring abnormal vaginal bleeding, adequate diagnostic measures should be undertaken to rule out malignancy. There is no evidence at present that "natural" estrogens are more or less hazardous than "synthetic" estrogens at equi-estrogenic doses
2. ESTROGENS SHOULD NOT BE USED DURING PREGNANCY.
The use of female sex hormones, both estrogens and progestogens, during early pregnancy may seriously damage the offspring. It has been shown that females exposed in utero to diethylstilbestrol, a nonsteroidal estrogen, have an increased risk of developing, in later life, a form of vaginal or cervical cancer that is ordinarily extremely rare. This risk has been estimated as not greater than 4 per 1,000 exposures. Furthermore, a high percentage of such exposed women (from 30% to 90%) have been found to have vaginal adenosis, epithelial changes of the vagina and cervix. Although these changes are histologically benign, it is not known whether they are precursors of malignancy. Although similar data are not available with the use of other estrogens, it cannot be presumed they would not induce similar changes. Several reports suggest an association between intrauterine exposure to female sex hormones and congenital anomalies, including congenital heart defects and limb-reduction defects. One case-controlled study estimated a 4.7-fold increased risk of limb-reduction defects in infants exposed in utero to sex hormones (oral contraceptives, hormone withdrawal tests for pregnancy, or attempted treatment for threatened abortion). Some of these exposures were very short and involved only a few days of treatment. The data suggest that the risk of limb-reduction defects in exposed fetuses is somewhat less than 1 per 1,000. In the past, female sex hormones have been used during pregnancy in an attempt to treat threatened or habitual abortion. There is considerable evidence that estrogens are ineffective for these indications, and there is no evidence from well-controlled studies that progestogens are effective for these uses. If PREMARIN is used during pregnancy, or if the patient becomes pregnant while taking this drug, she should be apprised of the potential risks to the fetus, and the advisability of pregnancy continuation.

DESCRIPTION: PREMARIN (conjugated estrogens, USP) contains a mixture of estrogens, obtained exclusively from natural sources, blended to represent the average composition of material derived from pregnant mares' urine. It contains estrone, equilin, and 17α-dihydroequilin, together with smaller amounts of 17α-estradiol, equilenin, and 17α-dihydroequilenin as salts of their sulfate esters. Tablets are available in 0.3 mg, 0.625 mg, 0.9 mg, 1.25 mg, and 2.5 mg strengths of conjugated estrogens. Cream is available as 0.625 mg conjugated estrogens per gram.

INDICATIONS AND USAGE: PREMARIN (conjugated estrogens tablets, USP): Moderate-to-severe *vasomotor* symptoms associated with the menopause. (There is no evidence that estrogens are effective for nervous symptoms or depression without associated vasomotor symptoms and they should not be used to treat such conditions.) Osteoporosis (abnormally low bone mass). Atrophic vaginitis. Kraurosis vulvae. Female castration.

PREMARIN (conjugated estrogens) Vaginal Cream is indicated in the treatment of atrophic vaginitis and kraurosis vulvae.

PREMARIN HAS NOT BEEN SHOWN TO BE EFFECTIVE FOR ANY PURPOSE DURING PREGNANCY AND ITS USE MAY CAUSE SEVERE HARM TO THE FETUS (SEE BOXED WARNING).

Concomitant Progestin Use: The lowest effective dose appropriate for the specific indication should be utilized. Studies of the addition of a progestin for 7 or more days of a cycle of estrogen administration have reported a lowered incidence of endometrial hyperplasia. Morphological and biochemical studies of the endometrium suggest that 10 to 13 days of progestin are needed to provide maximal maturation of the endometrium and to eliminate any hyperplastic changes. Whether this will provide protection from endometrial carcinoma has not been clearly established. There are possible additional risks which may be associated with the inclusion of progestin in estrogen replacement regimens. (See PRECAUTIONS.) The choice of progestin and dosage may be important; product labeling should be reviewed to minimize possible adverse effects.

CONTRAINDICATIONS: Estrogens should not be used in women (or men) with any of the following conditions: 1. Known or suspected cancer of the breast except in appropriately selected patients being treated for metastatic disease. 2. Known or suspected estrogen-dependent neoplasia. 3. Known or suspected pregnancy (see Boxed Warning). 4. Undiagnosed abnormal genital bleeding. 5. Active thrombophlebitis or thromboembolic disorders. 6. A past history of thrombophlebitis, thrombosis, or thromboembolic disorders associated with previous estrogen use (except when used in treatment of breast or prostatic malignancy).

WARNINGS: Estrogens have been reported to increase the risk of endometrial carcinoma (see Boxed Warning). However, a recent large, case-controlled study indicated no increase in risk of breast cancer in postmenopausal women. A recent study has reported a 2- to 3-fold increase in the risk of surgically confirmed gallbladder disease in women receiving postmenopausal estrogens.

Adverse effects of oral contraceptives may be expected at the larger doses of estrogen used to treat prostatic or breast cancer or postpartum breast engorgement; it has been shown that there is an increased risk of thrombosis in men receiving estrogens for prostatic cancer and women for postpartum breast engorgement. Users of oral contraceptives have an increased risk of diseases, such as thrombophlebitis, pulmonary embolism, stroke, and myocardial infarction. Cases of retinal thrombosis, mesenteric thrombosis, and optic neuritis have been reported in oral contraceptive users. An increased risk of postsurgery thromboembolic complications has also been reported in users of oral contraceptives. If feasible, estrogen should be discontinued at least 4 weeks before surgery of the type associated with an increased risk of thromboembolism, or during periods of prolonged immobilization. Estrogens should not be used in persons with active thrombophlebitis, thromboembolic disorders, or in persons with a history of such disorders in association with estrogen use. They should be used with caution in patients with cerebral vascular or coronary artery disease. Large doses (5 mg conjugated estrogens per day), comparable to those used to treat cancer of the prostate and breast, have been shown to increase the risk of nontatal myocardial infarction, pulmonary embolism, and thrombophlebitis. When doses of this size are used, any of the thromboembolic and thrombotic adverse effects should be considered a clear risk.

Benign hepatic adenomas should be considered in estrogen users having abdominal pain and tenderness, abdominal mass, or hypovolemic shock. Hepatocellular carcinoma has been reported in women taking estrogen-containing oral contraceptives. Increased blood pressure may occur with use of estrogens in the menopause and blood pressure should be monitored with estrogen use. A worsening of glucose tolerance has been observed in patients on estrogen-containing oral contraceptives. For this reason, diabetic patients should be carefully observed. Estrogens may lead to severe hypercalcemia in patients with breast cancer and bone metastases.

PRECAUTIONS: Physical examination and a complete medical and family history should be taken prior to the initiation of any estrogen therapy with special reference to blood pressure, breasts, abdomen, and pelvic organs, and should include a Papanicolaou smear. As a general rule, estrogen should not be prescribed for longer than one year without another physical examination being performed. Conditions influenced by fluid retention, such as asthma, epilepsy, migraine, and cardiac or renal dysfunction, require careful observation. Certain patients may develop manifestations of excessive estrogenic stimulation, such as abnormal or excessive uterine bleeding, mastodynia, etc. Prolonged administration of unopposed estrogen therapy has been reported to increase the risk of endometrial hyperplasia in some patients. Oral contraceptives appear to be associated with an increased incidence of mental depression. Patients with a history of depression should be carefully observed. Pre-existing uterine leiomyomata may increase in size during estrogen use. The pathologist should be advised of estrogen therapy when relevant specimens are submitted. If jaundice develops in any patient receiving estrogen, the medication should be discontinued while the cause is investigated. Estrogens should be used with care in patients with impaired liver function, renal insufficiency, metabolic bone diseases associated with hypercalcemia, or in young patients in whom bone growth is not yet complete. If concomitant progestin therapy is used, potential risks may include adverse effects on carbohydrate and lipid metabolism.

The following changes may be expected with larger doses of estrogen:

a. Increased sulfobromophthalein retention.

b. Increased prothrombin and factors VII, VIII, IX, and X; decreased antithrombin 3; increased norepinephrine-induced platelet aggregability.

c. Increased thyroid binding globulin (TBG) leading to increased circulating total thyroid hormone, as measured by PBI, T_4 by column, or T_4 by radioimmunoassay. Free T_3 resin uptake is decreased, reflecting the elevated TBG; free T_4 concentration is unaltered.

d. Impaired glucose tolerance.

e. Decreased pregnanediol excretion.

f. Reduced response to metyrapone test.

g. Reduced serum folate concentration.

h. Increased serum triglyceride and phospholipid concentration.

As a general principle, the administration of any drug to nursing mothers should be done only when clearly necessary since many drugs are excreted in human milk.

Long-term, continuous administration of natural and synthetic estrogens in certain animal species increases the frequency of carcinomas of the breast, cervix, vagina, and liver. However, in a recent, large case-controlled study of postmenopausal women there was no increase in risk of breast cancer with use of conjugated estrogens.

ADVERSE REACTIONS: The following have been reported with estrogenic therapy, including oral contraceptives: breakthrough bleeding, spotting, change in menstrual flow; dysmenorrhea; premenstrual-like syndrome; amenorrhea during and after treatment; increase in size of uterine fibromyomata; vaginal candidiasis, change in cervical erosion and in degree of cervical secretion; cystitis-like syndrome; tenderness, enlargement, secretion (of breasts); nausea, vomiting, abdominal cramps, bloating; cholestatic jaundice; chloasma or melasma which may persist when drug is discontinued, erythema multiforme; erythema nodosum; hemorrhagic eruption; loss of scalp hair; hirsutism; steepening of corneal curvature; intolerance to contact lenses; headache, migraine, dizziness, mental depression, chorea; increase or decrease in weight; reduced carbohydrate tolerance; aggravation of porphyria; edema; changes in libido.

ACUTE OVERDOSAGE: May cause nausea, and withdrawal bleeding may occur in females.

DOSAGE AND ADMINISTRATION:

PREMARIN® Brand of conjugated estrogens tablets, USP

1. *Given cyclically for short-term use only.* For treatment of moderate-to-severe *vasomotor* symptoms, atrophic vaginitis, or kraurosis vulvae associated with the menopause (0.3 mg to 1.25 mg or more daily). The lowest dose that will control symptoms should be chosen and medication should be discontinued as promptly as possible. Administration should be cyclic (eg, three weeks on and one week off). Attempts to discontinue or taper medication should be made at three- to six-month intervals.

2. *Given cyclically:* Osteoporosis. Female castration. Osteoporosis —0.625 mg daily. Administration should be cyclic (eg, three weeks on and one week off). Female castration—1.25 mg daily, cyclically. Adjust upward or downward according to response of the patient. For maintenance, adjust dosage to lowest level that will provide effective control.

Patients with an intact uterus should be monitored for signs of endometrial cancer and appropriate measures taken to rule out malignancy in the event of persistent or recurring abnormal vaginal bleeding.

PREMARIN® Brand of conjugated estrogens Vaginal Cream

Given cyclically for short-term use only. For treatment of atrophic vaginitis or kraurosis vulvae.

The lowest dose that will control symptoms should be chosen and medication should be discontinued as promptly as possible.

Administration should be cyclic (eg, three weeks on and one week off).

Attempts to discontinue or taper medication should be made at three- to six-month intervals.

Usual dosage range: 2 g to 4 g daily, intravaginally, depending on the severity of the condition.

Treated patients with an intact uterus should be monitored closely for signs of endometrial cancer and appropriate diagnostic measures should be taken to rule out malignancy in the event of persistent or recurring abnormal vaginal bleeding.

References:

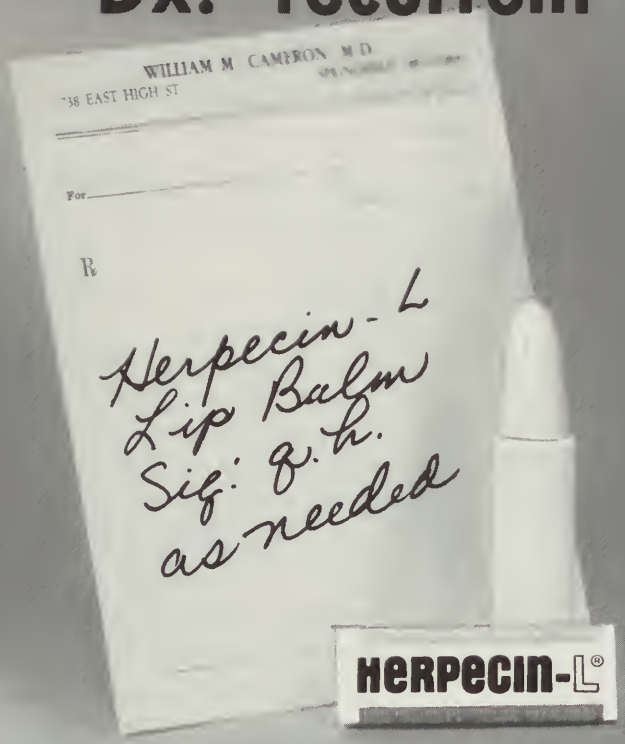
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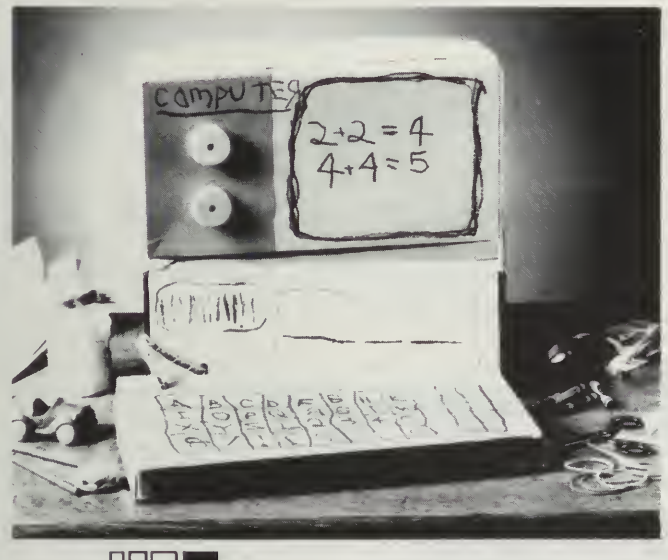
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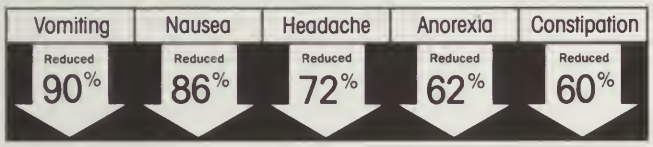
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- **Dramatic first-week reduction in somatic complaints[2]**

% Reduction in Somatic Symptoms[2]



- **Only ⅓ the dropout rate due to side effects of amitriptyline alone, although the incidence of side effects is similar[1]**

Caution patients about the combined effects of Limbitrol with alcohol or other CNS depressants and about activities requiring complete mental alertness, such as operating machinery or driving a car. In general, limit dosage to the lowest effective amount in elderly patients.

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In moderate depression and anxiety

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Limbitrol® DS

Each tablet contains 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt) Ⓘⓥ

References: 1. Feighner JP, *et al: Psychopharmocology 61*:217-225, Mar 22, 1979. **2.** Data on file, Hoffmann-La Roche Inc., Nutley, NJ.

Limbitrol® Ⓘⓥ
Tranquilizer—Antidepressant
Before prescribing, please consult complete product information, a summary of which follows:
Indications: Relief of moderate to severe depression associated with moderate to severe anxiety.
Contraindications: Known hypersensitivity to benzodiazepines or tricyclic antidepressants. Do not use with monoamine oxidase (MAO) inhibitors or within 14 days following discontinuation of MAO inhibitors since hyperpyretic crises, severe convulsions and deaths have occurred with concomitant use; then initiate cautiously, gradually increasing dosage until optimal response is achieved. Contraindicated during acute recovery phase following myocardial infarction.
Warnings: Use with great care in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur in patients taking tricyclic antidepressants and anticholinergic-type drugs. Closely supervise cardiovascular patients. (Arrhythmias, sinus tachycardia and prolongation of conduction time reported with use of tricyclic antidepressants, especially high doses. Myocardial infarction and stroke reported with use of this class of drugs.) Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving).

***Usage in Pregnancy:* Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Since physical and psychological dependence to chlordiazepoxide have been reported rarely, use caution in administering Limbitrol to addiction-prone individuals or those who might increase dosage; withdrawal symptoms following discontinuation of either component alone have been reported (nausea, headache and malaise for amitriptyline; symptoms [including convulsions] similar to those of barbiturate withdrawal for chlordiazepoxide).
Precautions: Use with caution in patients with a history of seizures, in hyperthyroid patients or those on thyroid medication, and in patients with impaired renal or hepatic function. Because of the possibility of suicide in depressed patients, do not permit easy access to large quantities in these patients. Periodic liver function tests and blood counts are recommended during prolonged treatment. Amitriptyline component may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady state concentrations of the tricyclic drugs. Concomitant use of Limbitrol with other psychotropic drugs has not been evaluated; sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Limbitrol should not be taken during the nursing period. Not recommended in children under 12. In the elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects.
Adverse Reactions: Most frequently reported are those associated with either component alone: drowsiness, dry mouth, constipation, blurred vision, dizziness and bloating. Less frequently occurring reactions include vivid dreams, impotence, tremor, confusion and nasal congestion. Many depressive symptoms including anorexia, fatigue, weakness, restlessness and lethargy have been reported as side effects of both Limbitrol and amitriptyline. Granulocytopenia, jaundice and hepatic dysfunction have been observed rarely.
The following list includes adverse reactions not reported with Limbitrol but requiring consideration because they have been reported with one or both components or closely related drugs:
Cardiovascular: Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke.
Psychiatric: Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania and increased or decreased libido.
Neurologic: Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns.
Anticholinergic: Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract.
Allergic: Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus.
Hematologic: Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia.
Gastrointestinal: Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue.
Endocrine: Testicular swelling and gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion.
Other: Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.
Overdosage: Immediately hospitalize patient suspected of having taken an overdose. Treatment is symptomatic and supportive. I.V. administration of 1 to 3 mg physostigmine salicylate has been reported to reverse the symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.
Dosage: Individualize according to symptom severity and patient response. Reduce to smallest effective dosage when satisfactory response is obtained. Larger portion of daily dose may be taken at bedtime. Single *h.s.* dose may suffice for some patients. Lower dosages are recommended for the elderly. Limbitrol DS (double strength) Tablets, initial dosage of three or four tablets daily in divided doses, increased up to six tablets or decreased to two tablets daily as required. Limbitrol Tablets, initial dosage of three or four tablets daily in divided doses, for patients who do not tolerate higher doses.
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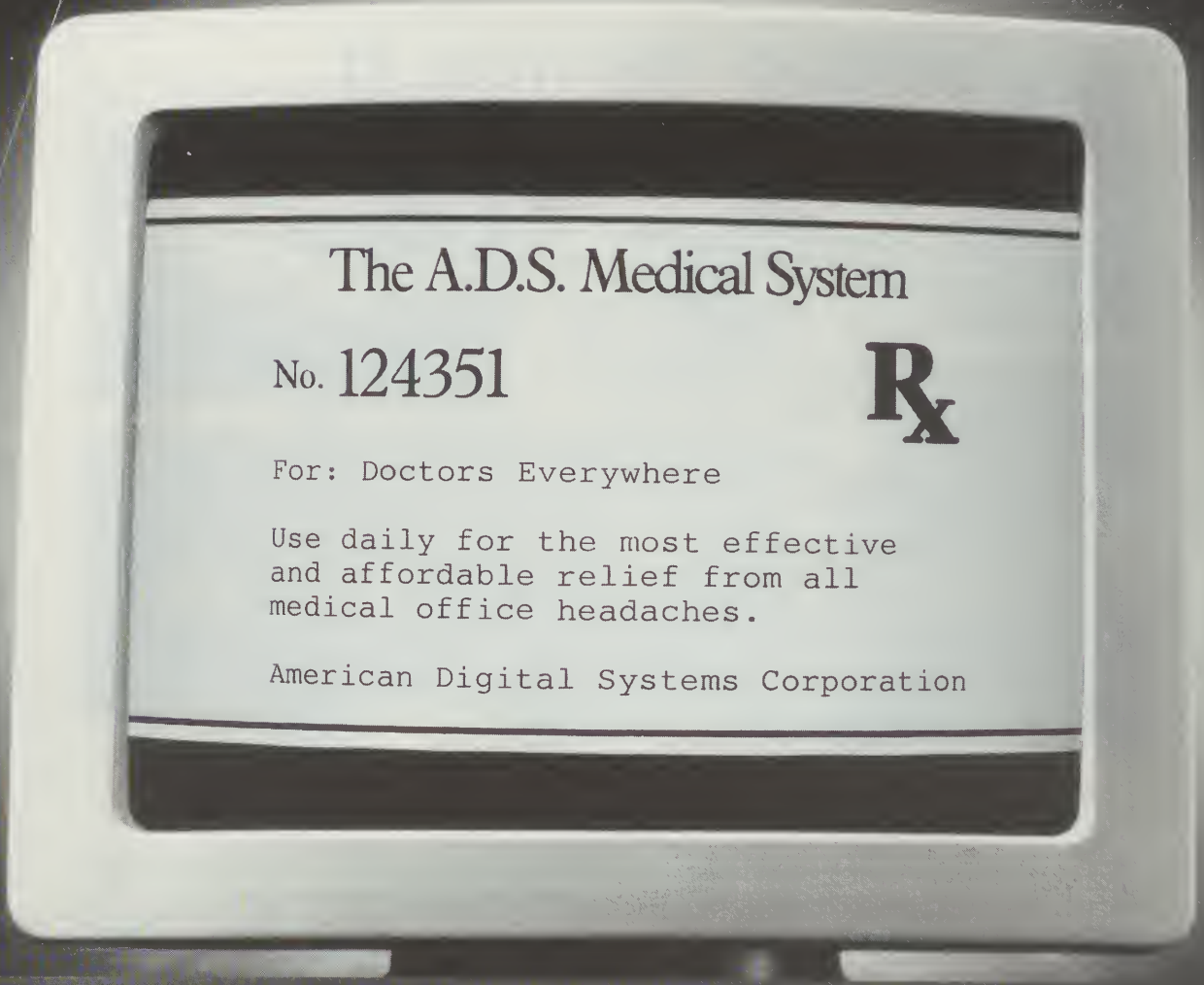
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On the cover: an early drawing of appendix surgical incisions by Max Brödel. From *Appendicitis and Other Diseases of the Vermiform Appendix*, by Howard A. Kelly MD. Philadelphia and London: J. B. Lippincott Company, 1905, reprinted with permission.

The views in this publication are those of the authors and do not necessarily reflect the opinion of the Medical and Chirurgical Faculty of the State of Maryland.

MR UPDATE

MRI is Rapidly Replacing CT & Myelography For Evaluation of HNP

LUMBAR SPINE



HISTORY: This 38-year-old male complained of recent onset of low back pain radiating to left lower extremity.

SCAN: This midline sagittal image demonstrates the high intensity (white) discs lying between the vertebral bodies. The L4-5 disc is herniated posteriorly with a "mushroom configuration" (long arrow). CSF in the spinal canal is gray (short arrow), and this CSF column is indented by the herniated disc material at the L4-5 level (long arrow). Axial images at the other levels demonstrated that the high intensity disc material is contained, and disc herniation can be confidently excluded at all the other levels.

MRI HIGHLIGHTS: Lumbar and cervical surface coil MRI is rapidly replacing myelography and computerized tomography for initial evaluation of suspected disc herniation and suspected spinal stenosis. Standard MR examination shows the entire lumbar or cervical spine, the spinal canal and the paraspinal region. Causes of low back or neck pain and sciatica are well demonstrated without injection of contrast material and without ionizing radiation. The bony structures are well shown, and destructive bony lesions and extraosseous extension of bony lesions are routinely demonstrated on MRI. Intraspinal neoplasms are also confidently detectable.

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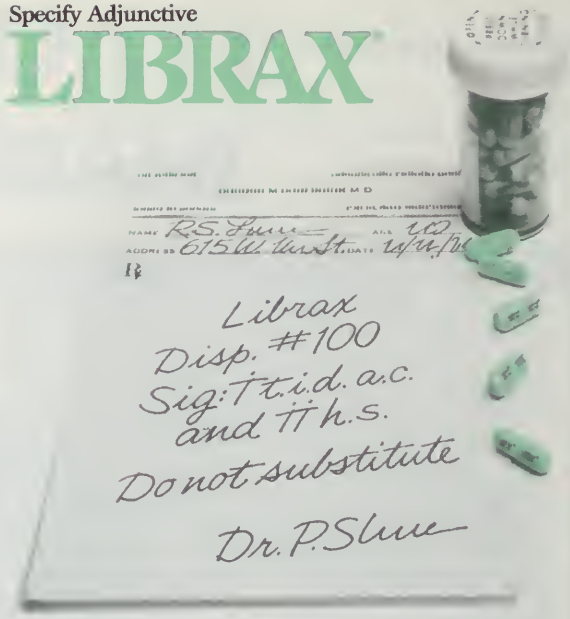
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"Possibly" effective: as adjunctive therapy in the treatment of peptic ulcer and in the treatment of the irritable bowel syndrome (irritable colon, spastic colon, mucous colitis) and acute enterocolitis.
Final classification of the less-than-effective indications requires further investigation.

Contraindications: Glaucoma; prostatic hypertrophy, benign bladder neck obstruction; hypersensitivity to chlordiazepoxide HCl and/or clidinium Br.

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Usage in Pregnancy: **Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy. Advise patients to discuss therapy if they intend to or do become pregnant.**

As with all anticholinergics, inhibition of lactation may occur.

Precautions: In elderly and debilitated, limit dosage to smallest effective amount to preclude ataxia, oversedation, confusion (no more than 2 capsules/day initially; increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider pharmacology of agents, particularly potentiating drugs such as MAO inhibitors, phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions reported in psychiatric patients. Employ usual precautions in treating anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship not established.

Adverse Reactions: No side effects or manifestations not seen with either compound alone reported with Librax. When chlordiazepoxide HCl is used alone, drowsiness, ataxia, confusion may occur, especially in elderly and debilitated; avoidable in most cases by proper dosage adjustment, but also occasionally observed at lower dosage ranges. Syncope reported in a few instances. Also encountered: isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent, generally controlled with dosage reduction; changes in EEG patterns may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice, hepatic dysfunction reported occasionally with chlordiazepoxide HCl, making periodic blood counts and liver function tests advisable during protracted therapy. Adverse effects reported with Librax typical of anticholinergic agents, *i.e.*, dryness of mouth, blurring of vision, urinary hesitancy, constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diets.

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*Librax has been evaluated as possibly effective as adjunctive therapy in the treatment of peptic ulcer and the irritable bowel syndrome.

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Hopkins Seeks Volunteers for AIDS Drug Trials

The AIDS Drug Treatment Evaluation Unit at The Johns Hopkins Medical Institutions is seeking volunteers for four anti-AIDS drug trials. Volunteers should be at least 18 years old and have HIV, the virus that causes acquired immune deficiency syndrome.

Three trials using azidothymidine (AZT), also known as ZDV (zidozudine) or retrovir, began recruiting study volunteers in July:

Trial 1 Hopkins needs 50 to 60 HIV-positive patients without any symptoms of AIDS for a three-year study examining the effects of the drug.
Trial 2 Hopkins needs 15 to 20 AIDS or advanced AIDS Related Complex (ARC) patients for a six-month study of safety and tolerance of the drug. Patients can be taking AZT currently.
Trial 3 Hopkins needs 20 volunteers with early ARC or persistent lymphadenopathy syndrome. The two-year study will compare AZT and a placebo to examine safety, tolerance, and efficacy. Patients should not have taken AZT 30 days prior to the study.

One current Hopkins trial examines DDC (didioxycytodine). Hopkins is seeking 24 AIDS or ARC patients for the study that tests six different doses of the drug during a four-day hospital stay.

For all trials, individuals may call 301-955-2898 for more information on qualifications and registration. Hopkins is one of 19 drug-testing centers selected nationwide in June 1986 by the National Institute of Allergy and Infectious Diseases. John G. Bartlett MD, chief of the division of infectious diseases at Hopkins, directs the Hopkins unit.

• • •

Baltimore Critical Care Medicine Society 1987/88 Program

Membership in the Baltimore Critical Care Medicine Society is open to all local physicians and other health-care professionals who are involved or interested in critical-care medicine. The Society plans to hold at least four meetings in the coming year with distinguished speakers addressing topics such as reimbursement issues in critical care, nutrition in the critically ill, and other critical-care topics of interest to all physicians. For information about membership and requests to be placed on the mailing list, please call Dr. Alan Sweatman (Secretary/Treasurer) at 522-8608/8605 or write Dr. Sweatman at Church Hospital, 100 N. Broadway, Baltimore, MD 21231.

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New Program on Starting a Small Business

For attorneys, accountants, health-care providers, and other professionals interested in exploring entrepreneurial options, Hopkins' Columbia Center offers a new certificate program on starting and managing a small professional business.

"Small Business Development for the Professional" is led by a leadership/mentor team composed of professionals (a dentist, accountant, physician, financial consultant, and attorney) who have formed their own successful small business ventures.

Sessions meet one Saturday a month at Hopkins' Columbia Center, from 9 a.m. to 4:30 p.m., October 1987 through March 1988.

For more information on this program call 338-8490.

• • •

St. Agnes Receives Grant

The National Emergency Medicine Association has awarded a $210,000 grant to St. Agnes Hospital's Coronary Care System. One-third of the grant funds have been designated to improve equipment for coronary care, one-third for local education, and one-third for education nationally.

In commenting on the purpose of the grant, Coronary Care System Director **Raymond D. Bahr** MD stated, "To provide efficient and maximal care for the nation's number one health problem (heart attack), hospitals must interface with the community by providing a rapid delivery system of early ischemic heart disease patients. The system must not only be aimed at crises intervention (resuscitation) but also have as its base community oriented, educational, preventive programs that provide rapid movement of patients most apt to be maximally helped. The Chest Pain Emergency Service at St. Agnes Hospital serves this purpose and is considered a prototype for early intervention.

"The grant from the National Emergency Medicine Association will enable St. Agnes' Coronary Care System to use creative methods of informing the public, locally and nationally, of the importance of early cardiac care. Treatment within the first hour of the warning signs of a heart attack increases the chance of saving heart muscle, which sustains not only life but also the quality of life," Dr. Bahr concluded.

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Alzheimer Disease is a little understood, even frightening facet of aging about which more public information is needed. To address this need, Meridian Healthcare has produced a booklet on Alzheimer. This guide will be offered free in commercial radio broadcast advertising as part of Meridian's continuing public information campaign.

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OCTOBER 1987

AIDS AND MOSQUITOES

Recently, much concern has surrounded the possible role of mosquitoes in the transmission of the human immunodeficiency virus (HIV), the virus that causes AIDS. In this article, we clarify the mechanisms by which mosquitoes can transmit viral agents, and examine available published data pertinent to such transmission.

Arthropod vectors can transmit pathogens biologically or mechanically. In biological transmission, the arthropod is essential for the growth or development of the pathogen. Such transmission can be categorized as: 1) "cyclo-propagative," where the organisms undergo cyclical changes and multiply in the arthropod vector (e.g., Plasmodium species which cause malaria); 2) "cyclo-developmental," where the organisms undergo cyclical changes in the arthropod, but do not multiply (e.g., Wuchereria bancrofti, the agent of bancroftian filariasis); and 3) "propagative," where the organisms multiply without cyclical changes (e.g., arthropod-borne viruses, such as western encephalitis virus). Specifically, for mosquito-transmitted viral diseases, the virus must enter the mosquito and propagate. Virus is then disseminated in the mosquito and subsequently concentrates in the salivary gland. Infection of the human host results at the time of feeding from introduction of virus-containing mosquito saliva. Studies involving both natural feeding and intrathoracic inoculation of extreme concentrations (1,000 to 1 million times human infection levels) of HIV into mosquitoes have shown that HIV does not propagate in mosquitoes (personal communication, Thomas Monath, M.D., Division of Vector-borne Viral Disease, Centers for Disease Control). Therefore, the possibility of biological transmission of HIV is extremely remote. This is not unexpected, since most viruses that infect humans (e.g., measles, mumps, rubella, hepatitis B virus, cytomegalovirus, and Epstein-Barr virus) have not been demonstrated to be biologically transmitted through mosquitoes.

The second mode of transmission, mechanical transmission, can occur with viral agents and results when the arthropod is a carrier. Transmission of the pathogen generally occurs through contamination of its mouth parts or regurgitation of blood into the new host. This type of transmission could theoretically result if a mosquito bit an

HIV-infected person and then subsequently bit an uninfected person. When considering this type of transmission for HIV, several important factors need to be taken into consideration. These include the volume of infected blood required to result in transmission, mosquito feeding habits, and available epidemiologic data substantiating this hypothesis. Each of these three factors will be separately addressed.

First, in examining the volume of blood required for transmission, currently available data for health-care workers are applicable. These studies indicate that the likelihood of HIV transmission resulting from a needle-stick or non-parenteral mucous membrane exposure is extremely small, supporting the fact that substantial volume of blood is required before transmission will occur. The amount of blood contaminating the mouth parts of mosquitoes is likely to be less than the amount of blood resulting from exposure to a contaminated needle, as seen in the hospital setting. Also, in the health care setting, hepatitis B virus (HBV) has been demonstrated to be much more likely to be transmitted through needle-stick injury than HIV, indicating that exposure to a smaller volume of blood will transmit HBV. Hepatitis B surface antigen (HBsAg) has been demonstrated in wild-caught African mosquitoes, yet there has been no evidence of transmission of HBV by mosquitoes. In one study, mosquitoes were allowed to feed on chimpanzees infected with HBV. The feeding was interrupted and the mosquitoes were allowed to complete their feeding on non-infected susceptible chimpanzees. Although homogenates of mosquitoes showed the presence of HBsAg, the exposed chimpanzees remained uninfected, suggesting no risk of mosquito-related mechanical transmission of HBV. Since mechanical transmission has not been demonstrated for HBV, it is even less likely that such transmission would occur with HIV due to the larger volume of blood required.

The second point to consider is the feeding habits of the mosquito. Mosquitoes do not regurgitate blood consumed from a previous host, and they have relatively small mouth parts, allowing for less blood contamination. Both characteristics reduce the likelihood of mechanical transmission. In addition, mosquitoes are theoretically more likely to complete a blood meal because they induce a painless bite, unlike a biting fly, so they generally do not need to seek a subsequent host to complete an interrupted blood meal.

The third important point is the current available information on the epidemiology of HIV infection. Several epidemiologic observations do not support mosquito transmission of HIV. First, in the United States, HIV infection has occurred in persons with known risk factors for acquiring infection and has not occurred randomly, as would be expected if arthropods were transmitting HIV. Studies in Belle Glade, Florida, which has a very high incidence of AIDS and where mosquito transmission has been postulated, have shown that the AIDS cases reported from that region are related to intravenous drug abuse or heterosexual transmission, and are not due to mosquito transmission. Secondly, in Africa, AIDS is largely a disease of sexually active young adults living in urban areas; the seroprevalence is much lower in rural areas. A recent study in Zaire has demonstrated a seroprevalence for HIV antibody of 0.8% in healthy

members of rural villages, where mosquito transmission of disease is likely to occur. In contrast, studies have demonstrated HIV antibody seroprevalence rates ranging from 27% to 88% for high-risk groups in urban African areas. Also, older African children (those not at risk for perinatal HIV transmission) do not appear to be at risk for acquiring HIV. This demographic pattern in Africa is quite different than that for malaria, a known vector-borne disease. Finally, household studies of HIV transmission have demonstrated that persons living with someone with AIDS or someone infected with HIV are not at increased risk of acquiring infection, which would be expected if mosquitoes or other arthropods were important for transmission.

In summary, HIV has not been demonstrated to propagate in the mosquito host, and no available data support biological transmission. Secondly, mechanical transmission is not supported by the volume of blood required to cause infection, the feeding habits of mosquitoes, or the currently available epidemiologic data.
References available upon request.
Reprinted from the "Minnesota Department of Health Disease Control Newsletter", August 1987, Volume 13, No. 7, pp 53-54.

Recommendations of the Immunization
Practices Advisory Committee (ACIP)

Update:Prevention of Haemophilus influenzae Type b Disease

On June 23, 1987, the Immunization Practices Advisory Committee (ACIP) reviewed preliminary postmarketing surveillance data presented at an April 20, 1987, FDA workshop on Haemophilus influenzae type b (Hib) polysaccharide vaccines. These data were evaluated in light of the current ACIP recommendations for use of the vaccine and for prophylaxis with rifampin in the prevention of invasive Hib disease.

The ACIP believes that the preliminary data from these ongoing studies do not indicate a need for changes in the present recommendations for vaccine use. It should be emphasized that vaccination is not a substitute for prophylaxis with rifampin in children exposed to Hib disease.
References available upon request.
Reprinted from the Centers for Disease Control (CDC), Morbidity and Mortality Weekly Report (MMWR), August 21, 1987/Vol. 36/No. 32.

PREVENT NEEDLESTICK INJURIES

Accidental needletstick injuries are one of the most common occupational hazards facing **ALL** health care workers. The 1976 NIOSH report identified puncture wounds as the leading cause of occupational injury among the hospitals surveyed. A number of pathogens can be potentially transmitted by parenteral inoculation of contaminated blood or other bodily fluds. The major concern of the 1980's is the transmission of the systemic diseases, such as hepatitis B, non-A, non-B hepatitis, and AIDS. Despite the potential gravity of the consequences, needlestick injuries continue to be frequent among hospital staff.

The greatest incidence of needlestick injuries is among nursing personnel with the remainder among phlebotomists, laboratory personnel, and housekeeping and maintenance personnel. The literature reports that the annual incidence rate of needlestick injuries varies from 12.1 to 81.8 per 1,000 employees. A review of the literature also

showed a calculated conservative estimate of approximately 50,000 to 84,000 needlestick injuries per year among nurses alone.

Housekeeping and maintenance personnel sustain needlestick injuries during general cleaning and handling of the trash and linens. They are "innocent victims" of primary care staff who carelessly discard used sharp instruments into the trash or dirty linen.

Studies have shown that the majority of needlestick injuries can be attributed to the following activities:

1. improper needle disposal procedures
2. recapping used needles
3. administration of parenteral injections or infusions
4. drawing blood
5. cleaning procedure trays

In order to reduce the number of needlestick injuries, the CDC, JCAH, and EPA, have published recommendations for proper handling and disposal of needles. All three agencies recommend that every health care worker should take precautions to prevent injuries caused by any sharp instrument.

The majority of needlestick injuries are **PREVENTABLE** by practicing the following guidelines:

a. Immediate disposal of the uncapped needle and the syringe into a **PUNCTURE-PROOF, LEAK-PROOF,** disposal container. These containers should be labelled with the universal biohazard label and be placed in numerous convenient locations.
b. Needles should **NOT** be recapped, clipped, broken, or bent.
c. The disposal container should be sealed and removed for incineration when 3/4 full. No one should try to "stuff" a full container.
d. Adequate assistance should be obtained when administering injections or drawing blood from uncooperative patients.
e. Extreme care is recommended when handling needles or other sharp instruments used in procedures, such as lumbar punctures, thoracentesis, suturing, incision and drainage.
f. **GLOVES** should be worn when touching **ALL** patients' blood or bodily fluids. It is also recommended that housekeeping personnel wear gloves when handling needle disposal containers and not put their hands into the trash receptacles.
g. It is recommended that one should not startle anyone with a sharp instrument.
h. Sharp objects should not be left lying on countertops or on the floor.
i. All puncture wounds should be reported to the supervisor or employee health service immediately after the injury.
j. Each institution should promote in-service programs to increase personnel awareness regarding prevention of needlestick injuries.

PREVENTION IS THE BEST METHOD OF PROTECTION

References available upon request.

Respectfully submitted by Rekha Garg, M.D., University of Maryland, Preventive Medicine Resident, Epidemiology and Disease Control Program.

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Executive Director's Newsletter

October 1987

APPRECIATION OF STAFF

I am delighted to report that the staff members of the Faculty held a surprise party in recognition of my anniversary as CEO. I'd like to take this opportunity to express my deepest thanks and appreciation to the staff for their dedication and hard work during the past year. Med-Chi is fortunate to have such an outstanding group of people working together to achieve its goals.

BUILDING DEDICATION

Over 200 members and friends of Med-Chi attended the Dedication of the new Faculty building on Saturday, September 26, 1987. The Dedication Ceremony included remarks from Leon Kassel MD, President of Med-Chi; George Malouf MD, Chairman of the Building Committee; Thomas V. Mike Miller, President of the Senate, and Alan Rifkin, the Governor's Chief Legislative Officer, who delivered a proclamation from Governor Schaefer declaring September 26, 1987 as Med-Chi Day in Maryland.

In honor of the festivities, Bruno Mattiello, one of Med-Chi's staff members, designed a commemorative poster that was given out at the Dedication. The poster shows the facades of Med-Chi's two buildings with Apollo, the Greek God of Healing in his chariot looking down. In addition, Apollo's son, the first physician, is admiring the new building with Chiron, the centaur who taught him the art of medicine.

To order a commemorative poster, send a check for $6.50 payable to Med-Chi, 1211 Cathedral Street, Baltimore, MD 21201; Attention: Dedication Poster.

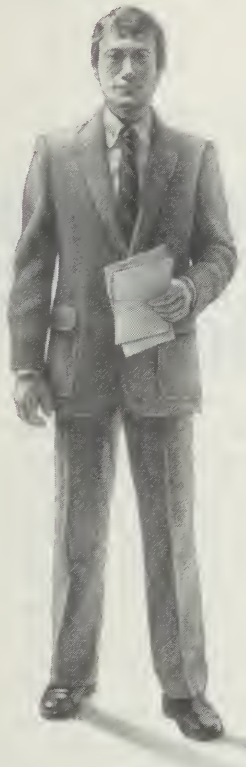
MAAC SEMINARS

The Faculty has organized three seminars on Maximum Actual Allowable Charge policies intended for private practicing physicians. Representatives from HCFA, and from the Pennsylvania and Maryland Blue Cross and Blue Shield carriers will provide information on this complex federal reimbursement mechanism.

The seminars will be held at the Faculty headquarters from 2-4 p.m. on the following dates: October 29, November 25, and December 23. There is no registration fee for Med-Chi members. For further information and confirmation of attendance, contact Pat Munoz at the Faculty office.

LEGISLATIVE PLAN

On September 22, 1987 the Legislative Committee met to begin formulation of the 1988 Legislative Plan. The Committee reaffirmed its 1987 opposition to Mandated Medicare Assignment, the optometric drug legislation, as well as an initiative to collapse to three the number of rating categories under which physicians could be charged medical malpractice insurance. We will keep you abreast of the Committee's actions in the coming months.



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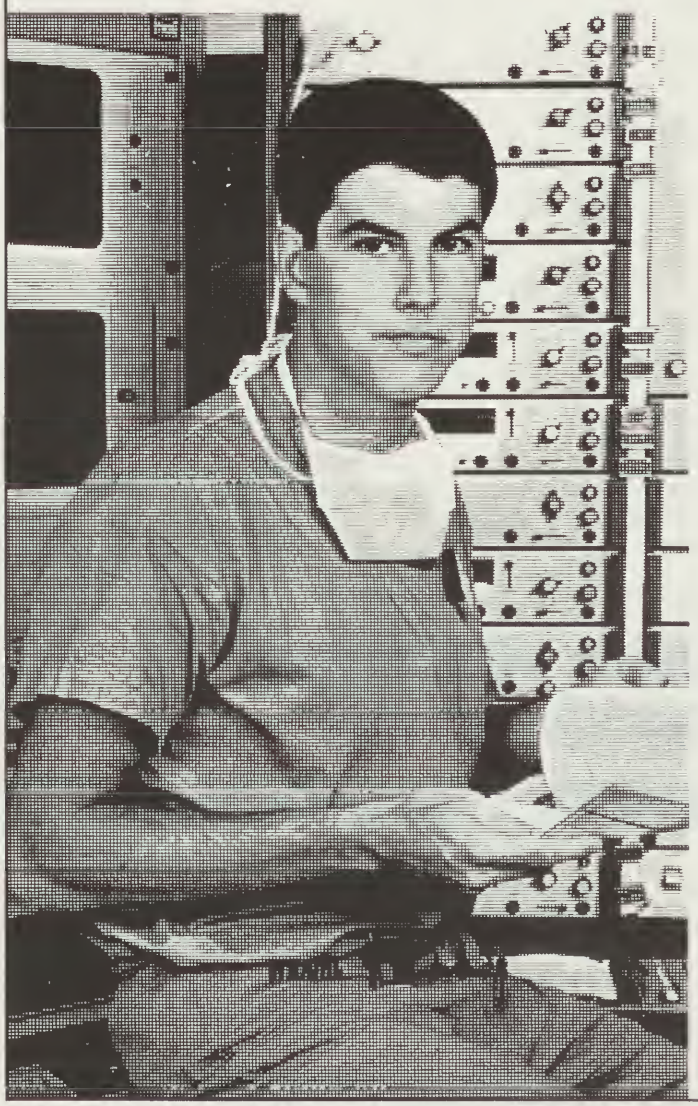
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AMA House of Delegates Annual Meeting 1987

Med-Chi's delegates attended AMA's Annual Meeting in Chicago last June 21–25. Their full report will be published in the December 1987 issue of *MMJ*; in the meantime, these are the highlights of their report.

• **AIDS** Prevention and control of AIDS dominated discussions at this meeting and received widespread media attention. Central to the discussion was a far-reaching report calling for 17 specific recommendations. A number of resolutions were also considered. Recommendations addressed AMA's overriding concern that there be a judicious balance between the well-being of HIV-positive patients and the protection of the public health. The expanded policy position directs AMA to continuously monitor and analyze developments in AIDS, and to update policy and recommendations as dictated by advances in knowledge.

The report stressed that education must continue to be the major weapon in halting the spread of HIV infection. Physicians should assume leadership in educating themselves, their patients, and the public. Individuals must assume responsibility for being well informed and for actions that affect their health and the health of others. There must be concerted and cooperative efforts by all members of society in the fight against AIDS.

The House approved revisions in the report and called for

1. Mandatory testing for the AIDS virus for donors of blood and blood fractions, organs, and other tissues intended for transplantation in the US or abroad; for donors of semen or ova collected for artificial insemination or *in vitro* fertilization; for immigrants to the US; and for military personnel.

2. Voluntary testing to be provided for patients from areas with a high incidence of AIDS or who engage in high-risk behavior requiring surgical or other invasive procedures. If the voluntary policy is not sufficiently accepted, the hospital and medical staff would be prudent to consider a mandatory program for the institution.

• **Foreign Medical Graduate Section** The House did *not* approve establishment of a new Section for Foreign Medical Graduates, which was recommended by the Board of Trustees. Calling it an emotional and difficult issue, the Reference Committee cited a number of reasons why the new Section would result in unmet needs and unfilled expectations among many FMGs. The House concurred in the Committee's belief that FMGs should be encouraged to become actively involved within their local and state societies.

• **AMA Finances** While there will be no dues increase in 1988, it is likely there will be in 1989 to support continued Association growth. The House filed the auditor's report showing an increase of 11.4 percent operating revenues and an increase of 9.4 percent in operating expenses in fiscal year 1986 over 1985.

• **Dispensing by Physicians** This issue received much attention as the House sought to clarify AMA's position. After considerable discussion, the House voted to adopt the following policy statement:

> RESOLVED, That the American Medical Association support the physician's right to dispense drugs and devices when it is in the best interest of the patient and consistent with AMA's ethical guidelines.

• **Health Policy Agenda for the American People** Culminating five years' effort to reexamine the basic values on which the health care system is based, the House considered 195 recommendations of the Health Policy Agenda for the American People and adopted the bulk of the recommendations as policy. It modified others based on the Board's advice and the testimony presented at the hearing of the Special Reference Committee.

• **PROs** The difficulties physicians are having with PROs continue to impact on the House of Delegates through the introduction of a large number of resolutions. The Council on Medical Service submitted a comprehensive report providing information on AMA's activities with respect to the PRO program.

The House asked AMA to seek an amendment to the Medicare law, amendments to the PRO law, and to continue to monitor the activities of PROs. It further recommended in cases involving a PRO denial that a physician of the same specialty review a case prior to sending the formal denial letter. In addition the House urged that AMA seek changes in the sanction and recommendation process and asked the Board to study whether the AMA should seek repeal of the PRO law.

• **Physician DRGs** The House reiterated AMA's strong opposition to include any physician under the DRG program.

• **Omnibus Budget Reconciliation Act (OBRA) of 1986** The House considered several resolutions that addressed problems physicians are experiencing with OBRA and called on the AMA to:

- advise its members that the decision of whether to be a "participating" physician in Medicare is a personal choice
- use all appropriate means to rescind recently enacted regulations and statutes that unfairly discriminate against health care providers, and jeopardize the quality, availability and affordability of health care for the aged and the infirm
- request Congress to return to the original intent of the Medicare Law (Title XVIII) as expressed in Sections 1801 and 1802 enacted in 1965
- specifically request Congress to rescind the "incentive" in OBRA regarding hospital referral of Medicare patients to participating physicians
- work to amend the Medicare law to eliminate any financial incentives to Medicare carriers for

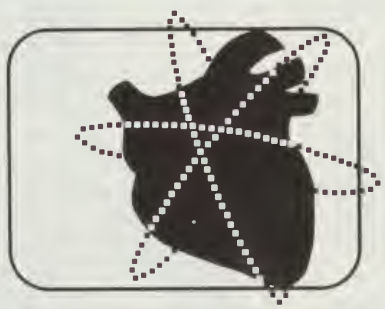
signing up large numbers of physician providers
- specifically seek to rescind, before its effective date of October 1, 1987, the OBRA provision that requires a nonparticipating physician who performs an elective surgical procedure on an unassigned basis for a Medicare beneficiary to provide the beneficiary in writing the estimated approved charge under Medicare, the excess of the physician's actual charge over the approved amount and the coinsurance applicable to the procedure

• **MAAC Regulations** The House considered a report from the Council on Medical Service and several resolutions dealing with problems associated with Medicare reimbursement and the discrepancies in Maximum Allowable Actual Charge (MAAC) calculations. The House called on AMA to continue to seek judicial, legislative, and regulatory changes to eliminate the MAAC regulations for participating physicians; in the meantime, to seek to assure that all Medicare fiscal intermediaries send to nonparticipating physicians adequate information for calculating MAAC levels; and to support any component society's legal efforts to prevent passage or to overturn state law restricting the right of physicians to contract for services rendered to their patients under certain conditions.

• **Scientific Informational Reports** Although no House action was required, the delegates received a record number of informational reports from the Council of Scientific Affairs. Of the 22 reports issued, 11 dealt with various aspects of AIDS. Single copies of these reports are available from the AMA's Division of Basic Science.

• **Tobacco** The House of Delegates took several actions to augment AMA's continuing program opposing use of tobacco products:

- Recommend that the Federal Aviation Administration establish regulations to ban smoking on all commercial aircraft
- Develop model legislation to improve enforcement of laws restricting children's access to tobacco, including a proposal to establish licenses for the sale of tobacco that could be revoked for conviction for sales to minors
- Encourage the passage of laws, ordinances, and regulations that would set the minimum age for purchasing tobacco products at 21
- Study the dangers of clove cigarettes
- Intensify efforts to educate the public about the hazards of using all tobacco products
- Urge physicians to provide "quit smoking messages" to all of their patients who smoke
- Encourage physicians to participate in continuing medical education activities designed to help them assist their patients to quit smoking
- Gather information regarding the progress that is being made on the national, state, and local levels toward achieving a "Tobacco Free Society by the Year 2000" and give progress reports to the house at each Interim Meeting until then.



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Highlights: Executive Committee and Council Actions

Executive Committee—June 18, 1987

• **Specialist Designation** Joseph I. Berman MD updated the Committee on the implementation of the Specialist Designation statute by the Board of Medical Examiners. The necessity of a medical review committee was addressed, so as to comply with the requirements of the law, and a motion was adopted that a full standing Committee on Specialist Identification be established. The Bylaws Committee will be so notified.

• **Improved Communications** At the request of Michael R. Dobridge MD, Med-Chi now has a tape machine available 7 days a week, 24 hours a day, for members to leave messages such as agenda items ideas, memos, etc. The telephone number is 301-224-0947.

• **AMA Smokers Program** AMA has requested assistance in obtaining additional cosponsors in Congress to support the Health Protection Act of 1987 (HR 1272), which would prohibit advertising and promoting tobacco products. The project involves the mailing of postcards by physician members to a member of Congress whenever a patient does of a smoking-related illness. Following discussion, a motion was adopted to support this project.

• **House of Delegates Motion** The following motion referred by the House of Delegates was considered:

> Awards shall not be presented as a general rule during House of Delegates' meetings. A separate awards luncheon, dinner meeting, or awards ceremony are suggested alternatives.

• **AMA AIDS Program** Support for this program to establish a speakers' bureau of physicians interested in educating the public about AIDS would include publicizing the program, assisting in the selection of physicians, providing partial funding for participant travel and hotel expenses, and organizing and coordinating an AIDS speakers' bureau in Maryland. Following a lengthy discussion, a motion was adopted to support and to fund this program with a cap of $3,000.

J. D. Drinkard MD, Chairman of the Ad Hoc Committee on AIDS, briefed the Executive Committee on AIDS programs in Maryland and volunteered to attend the AMA Workshop on AIDS in Baltimore on August 28 and 29. President Leon E. Kassel MD recommended that a member of the AIDS Committee attend the workshop. The Center for Health Education will cohost the workshop with Med-Chi.

• **Motor Vehicle Administration** The Committee considered a request from Ms. Lynn Russell for Faculty support in opposing draft regulations proposed by the Motor Vehicle Administration concerning emergency suspension of drivers' licenses. The Committee recommended a letter be sent to Ms. Russell suggesting that she write to her legislative representative expressing her opposition to these regulations.

• **EMS Committee** A report from the Committee on Emergency Medical Services set forth problems involving prepaid health plans. Following discussion, it was decided that the Faculty President would appoint a task force to address these issues, composed of Faculty members with special interest in emergency medicine and leaders within prepaid health plans.

• **Young Physicians Task Force** Susan Owens MD, Chair of the Young Physicians Task Force submitted a proposal recommending establishment of a Young Physicians Committee as a standing committee of the Faculty. This will be referred to the Bylaws Committee for formalization. Discussion ensued on whether the Faculty would cover travel costs for the delegate or alternate delegate selected to attend the AMA Young Physicians Section. It was decided such costs would not be paid by the Faculty.

• **Image Campaign** The Committee reviewed the results of the survey conducted in Western Maryland to measure the effectiveness of the pilot image campaign. Of a total of 276 surveys mailed to physicians in Allegany, Garrett, and Washington counties, 13 were completed and returned to Med-Chi.

The Public Relations Committee recommended that the campaign be launched statewide (regardless of survey results) based on the reliability of the expertise of the professionals who designed the campaign.

The Executive Committee agreed that neither the Public Relations Committee's report nor the survey results were strong enough to determine whether the campaign should be launched statewide. The project was returned to the Public Relations Committee for further review and development of a more detailed report before resubmission to the Executive Committee.

• **Consumers' Guide to Physicians' Fees** The Committee was informed that the Attorney-General's office was definitely going to publish the fee guide using 1986 data. Changes have been made in the format to advise consumers that this is Medicare data and that physicians' fees for non-Medicare patients may differ.

The earlier letter indicating Med-Chi's support that was to have been published in the "Guide for Choosing a Physician" has been withdrawn. The Executive Committee, having reviewed the alternate letter prepared by staff, approved it for publication.

• **Ad Hoc Committee to Study BC/BS Diagnostic Testing Guidelines** Minutes of this ad hoc committee were distributed for information with the request that the Faculty Delegation to the AMA go on record as supporting Resolution 101 as introduced by the New York Delegation. Following discussion, the Executive Committee agreed to support the request.

• **Med-Mutual Board** A recommendation from Senator "Mike" Miller regarding introduction of legislation to change the composition of the Med-Mutual Board of Directors was considered. Events surrounding tort reform that occurred during the 1987 legislative session were reviewed. Donald T. Lewers MD suggested that no action be taken on this issue at this time based on confidential information he had received but could not divulge to the Committee concerning activities within Med-Mutual. He recommended that Senator Miller be advised that we are studying the matter. No action was

taken by the Committee.

• **Med-Mutual Request for Physicians' Identifier Numbers** Discussion ensued regarding this request for Med-Chi's physicians' identifier numbers for Med-Mutual's use in determining the number of deliveries by physicians in Maryland. It was pointed out that we are prohibited by law to release the physician identifier number. Dr. Lewers moved to table the matter until after the rate filing decision is made.

• **Legislative Seminar** Raymond M. Atkins MD made a motion, duly seconded, to approve the Legislative Seminar sponsored by the Baltimore City, Baltimore County, Montgomery County, and Prince George's County medical societies. The seminar is scheduled to be held on Wednesday, September 16, 1987. The motion was adopted unanimously.

• **CME Credits** Chairman Reynaldo Lee-Llacer MD read the motion adopted by Council at its meeting on May 21, 1987 opposing the reported plan of the Board of Medical Examiners to revise the continuing medical education program. A letter of response from the Board indicated there was no plan for such a revision and recommended a reconsideration of the motion. This information will be reported to Council at its September meeting.

• **Medicare Signs** A letter from Attorney General Curran, citing the section of the law requiring physicians to place signs in their offices advising of their participation or nonparticipation in the Medicare program was discussed. The Committee was informed that this information will be published in the June issue of the *Maryland Medical Journal* to alert physicians to this legal requirement along with tear-out signs that they may place in their offices.

• **Baltimore County Incinerator Moratorium** The Executive Director briefed the committee on the staff's appearance at a recent hearing of the Baltimore County Council regarding a moratorium on construction of incinerators in the county for use in the disposal of infectious waste. The approved letter of the Executive Committee was presented.

• **Governor Schaefer's Appreciation** A letter from Governor Schaefer addressed to the statewide specialty societies expressing his appreciation for their support of tort reform legislation during the 1987 General Assembly was received for information.

• **Med-Mutual Rate Filing** The Committee was provided with a copy of letter to Edward J. Muhl, Commissioner of Insurance of the State of Maryland, in which an appeal was made for consideration of Med-Chi's comments about the recent rate filing by Medical Mutual.

• **MMLR and Med-Chi Relationship** The Committee received, for information only, a copy of a letter from William H.M. Finney MD, of MMLR, in response to the faculty's letter informing MMLR of Med-Chi's intention to discontinue our relationship with them.

• **Larry Young Convocation** A letter indicating our support of the Maryland Health Convocation was received for information. Mr. Troisi reported he had met with Mr. Young subsequent to our expression of support; Mr. Young indicated he would like to meet with Med-Chi again to discuss relevant issues.

• **Bar Bulletin** Information concerning the Maryland Bar Association's problems with its own organization and its lack of impact in Annapolis during the last legislative session was provided for information only.

• **Maryland Foundation for Health Care** This issue was discussed prior to the regularly scheduled Executive Committee meeting. John Engers MD and other representatives of the Maryland Foundation for Health Care discussed the status of the Foundation with regard to their lack of financial solvency, which would have immediately caused the Foundation to close all operations.

After some discussion, representatives of the Foundation requested a $10,000 line of credit that would be used only to cover operational costs such as payroll, taxes, and employee benefits caused by delay in payments from contractors (that is, Blue Cross/Blue Shield of Maryland). The Executive Committee exchanged further discussion with the Foundation representatives, who then left the meeting to await the decision of the Executive Committee.

It was decided to provide the $10,000 revolving line of credit for use by the Foundation during periods of a cash-flow shortfall and to otherwise assist in any way possible to assure the Foundation's continuance. The Foundation should continue because of its reputation for providing quality medical reviews and because its continued viability would at least allow some, if not all, of the start-up costs provided by the Faculty ($87,311) to be repaid periodically.

Executive Committee–July 16, 1987

• **HIV Testing in Hospitals** The Committee reviewed two draft letters (submitted by the Ad Hoc Advisory Committee on AIDS and the Joint Medicolegal Committee on AIDS) addressed to chiefs of hospital medical staffs and to hospital administrators, opposing policies being considered by the hospitals regarding HIV testing on all hospital admissions or preoperative patients. Following discussion, the letters were approved with the directive that it be made clear that members of the committees are physician representatives of Med-Chi and the attorney members are representatives of the Maryland Bar Association. A synopsis of the AMA policy on mandatory HIV testing for AIDS is to be included in the letter to the hospital administrators.

• **Letter to Surgeon General Koop on AIDS** At the request of J. D. Drinkard MD, Chairman of the Ad Hoc Advisory Committee on AIDS, consideration was given to a proposed letter to Surgeon General Everett C. Koop MD in opposition to attempts to implement mandatory preoperative HIV testing prior to major

surgical procedures. Following consideration of this matter, the Executive Committee approved the concept of the letter with direction for editorial changes.

• **Awards Presentation** Following discussion of the recommendations of the Ad Hoc Committee to Review the Awards Presentations, the following motion, after amendment, was adopted:

> That the presentation of the AMA-ERF checks, A. H. Robins Award, the Certificates of Appreciation to Committee Chairmen, and the announcement of the Photo Contest Winners will take place during the Annual Meeting, and further
>
> That those awards excluded at the Annual Meeting (Media Awards, *Journal* Awards, etc.) will be awarded during the Semiannual Meetings, beginning in September 1988, with a report (of the awards presented) to the House at the annual meeting.

• **Smokers Program** The Executive Committee agreed to participate in the AMA's postcard campaign in support of HR 1272 (the Health Protection Act of 1987). Physicians are asked to send a postcard to their member of the House of Representatives whenever one of their patients dies from a smoking-related illness.

After reviewing a sample postcard, the committee agreed to make an initial purchase of 5,000 cards for $196. The program will be announced in the *Maryland Medical Journal* with a sample card and information on how to order additional free cards from Med-Chi.

During discussion, it was suggested that component societies with full-time staff would be able to distribute the postcards to their members; however, the executives of Baltimore City and Baltimore County medical societies indicated they did not have adequate staff or the necessary funds for distribution of the cards.

• **Physician Identifier Number** Executive Director Angelo Troisi reported he had spoken with Paul H. Mathewson of Med-Mutual who indicated that Med-Mutual needs a means to identify OB deliveries in Maryland and would like Med-Chi to grant permission to use the physician identifier number for this purpose. This matter was discussed at length, followed by a motion (seconded and passed) that Med-Chi provide information (name and number of deliveries, but not the physician identifier number) to Med-Mutual provided (1) there is no objection by the OB/GYN Society and (2) there are no legal implications that would result from release of this data.

• **Ad Hoc Committee to Study Role Relationships** A copy of the unapproved minutes of this ad hoc group were distributed to the committee for information.

• **WBAL Radio Consultation Program** Members of the Executive Committee were contacted by Nina Casey last week and asked their opinion of WBAL's proposal to air "Consultation." Staff explained that the reactions were entirely favorable and an agreement was completed with WBAL. "Consultation" will be aired for one hour on Sunday afternoons beginning on August 2, 1987. John Stupak will be the moderator, and the cost will remain $150 per program.

• **Letters of Appreciation** Letters of appreciation from Governor Schaefer for a plaque presented to him by Med-Chi during the recent bill signing ceremony and from John Stierhoff for a certificate of recognition from Med-Chi were received for information.

• **Physician Rehabilitation Committee** The Committee discussed the Physician Rehabilitation Committee's request for approval to organize a second Conference on Impaired Professionals to be held in the spring, using the same format and cosponsors. Mr. Troisi informed the committee that it may be possible to plan the conference inhouse, thus saving the expenses involved in engaging the Health and Welfare Council for this purpose. Following discussion, the Committee adopted a motion to approve the conference in concept.

• **Roland Smoot MD** The committee congratulated Dr. Smoot on his recent election to the vice presidency of the Organization of State Medical Association Presidents (OSMAP).

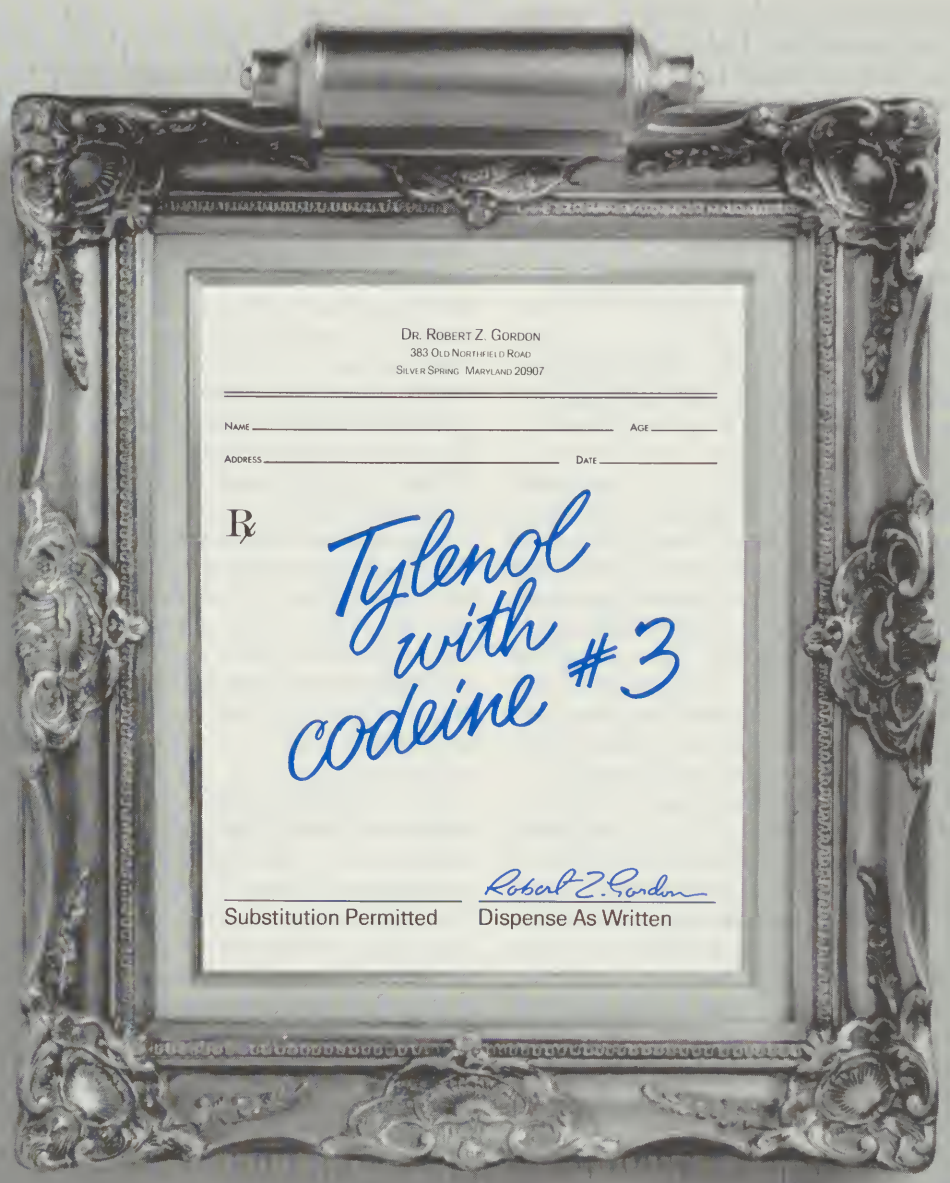
• **Incinerator Moratorium** A letter from Baltimore County Executive Dennis Rasmussen expressing appreciation for Med-Chi's comments concerning Baltimore County's plan to place a moratorium on infectious waste incinerators was received for information.

• **CHAMPUS Update** A news article in *American Hospital News* concerning the HCA withdrawal of its bid for CHAMPUS contracts was received for information.

• **Contracts with Commission on Medical Discipline and the AMA** Mr. Troisi reported that the contract with the Commission had been extended for two years and updated the progress of the program. The Committee also was advised that the AMA has designated Med-Chi as the first society in the nation to have access to their on-line physician masterfile, and that by the end of July the communications will have been established and the staff will be using the data system.

• **Physicians Reliance Association, Inc.** Mr. Troisi briefed the Committee on a recent meeting he attended with representatives of the Physicians Reliance Association, Inc., which is presently offering liability insurance to Maryland physicians. A letter in draft form, addressed to the Faculty's membership, in answer to many inquiries regarding the Physicians Reliance group, was presented to Committee members for consideration. Following discussion, a motion was adopted that the letter be mailed to the members of the Faculty in the most expeditious manner possible.

• **Fraudulent Emergency Calls** Mr. Troisi informed the committee that physicians in Montgomery and Prince George's counties reported receiving emergency phone calls by their answering services and it was determined the calls were placed by a survey group for an organization known as the Network Health Plan, who conducted a survey on the response time of physicians to emergency calls. Mr. Troisi informed the Montgomery County Policy Department who contacted the survey group, informing them that use of the telephone for this purpose was inappropriate. They were assured the calls would cease.



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Management of Head and Neck Tumors: Part II

The Oropharynx This area consists of the soft palate, the tonsils and tonsillar fossae, the base of the tongue, and the periepiglottic area. Soft palate tumors, usually epidermoid carcinoma, are common in men between the ages of 50 and 70. These tumors do not metastasize early, however the incidence of metastases increases with the increase in the size of the primary tumor. Small lesions can be treated by local surgical excision or radiation therapy. Larger lesions require wide resection and irradiation. This is followed by close observation, and if the cervical lymph node seems to get involved, radical neck dissection is in order. While these patients have low incidence of distant metastasis, they are at risk for other primary epidermoid carcinomas in the head and neck region as well as in the lungs and esophagus.

The Tonsillar area Tumors in this area are usually epidermoid carcinomas or lymphomas. Other nonmalignant lesions may be tuberculous or syphilitic. Small epidermoid carcinomas can be managed by radiation therapy or by intraoral resection of the lesion. Large tumors require wide resection (through mandibulectomy) that include resection of part of the pharyngeal wall and radical neck dissection. This is followed by radiation therapy. Over 25 percent of these patients will develop another primary carcinoma in the head and neck region, lungs, and/or esophagus. Lymphoma is managed by irradiation for localized disease and systemic chemotherapy for advanced stages. The base of the tongue is the portion behind the circumvallate papillae, and it forms the anterior wall of the valleculae. The most common tumors in this are are epidermoid carcinomas and lymphomas. However, such lesions should be differentiated from thyroglossal duct cyst, salivary gland tumors and cysts, hypertrophic lymphoid tissue, lingual thyroid, and metastatic lesions. Epidermoid carcinomas of the base of the tongue have poor prognosis as they present in more advanced stages than those with anterior tongue lesions. The surgical management is mutilating, and it includes glossectomy with a partial or total laryngectomy and radical neck dissection followed by irradiation. The overall survival is about 30 percent. Such poor results led some surgeons to manage these patients with radiation therapy. Recently, chemotherapy with a platinum compound is being tried consecutively with irradiation. Lymphomas, usually of the non-Hodgkin's type, are histiocytic or lymphocytic and are managed by irradiation. However, if systemic, chemotherapy must be added.

The Periepiglottic area The most common tumor is epidermoid carcinoma. While small lesions can be managed by radiation therapy, larger lesions will require partial or total laryngectomy and radical neck dissection, as this area has a very rich lymphatic drainage.

The Larynx The most common tumor is primary epidermoid carcinoma. This carries a better prognosis compared to a counterpart in the oral cavity, oropharynx, or hypopharynx. The laryngeal area can be divided into three sites, namely supraglottic, glottic, and subglottic. The supraglottic region includes the epiglottis, the folso cords, and the aryepiglottic folds. The glottic region is 1.5 to 2.0 cm in its vertical dimension and includes the vocal cords and their commissures. It is the most common site for cancer of the larynx. The patient usually presents with hoarseness. The diagnosis is suspected by indirect laryngoscopy. Keratosis, atypia, carcinoma in situ, and microinvasion can be treated by local limited excision and indefinite observation. Stage I carcinoma with mobile cords can be treated by irradiation. More advanced tumors (fixed cords) must be treated by laryngectomy. The subglottic region extends from 0.5 cm below the vocal cords superiorly to the inferior border of the cricoid cartilage. Tumors in this area are rare and mainly epidermoid carcinoma. The treatment is by total laryngectomy.

The larynx also can be the site of other malignant tumors such as cartilaginous tumors, minor salivary gland tumors, soft tissue sarcoma, and melanoma. Such tumors are managed by laryngectomy, except for melanoma, which requires laryngectomy and radical neck dissection. Primary oat cell carcinoma is rare and is treated primarily by irradiation.

Metastatic carcinomas to the larynx are rare. Renal cell carcinoma is the most common one, but other metastases are encountered from melanoma, breast, lung, prostate, and gastrointestinal tract. Although the primary management must be directed to the treatment of the systemic disease, local control of the laryngeal lesion is essential to maintain the airway.

Benign tumors of the larynx such as polyps, inclusion cysts, fibromas, lipoma, chondromas, myomas, and myoblastomas are treated by local excision.

The Hypopharynx It extends below the oropharynx from the tip of the epiglottis superiorly to the level of the lower border of the cricoid cartilage inferiorly. It comprises the pyriform sinus, the posterolateral pharyngeal wall and the postcricoid region. Epidermoid carcinoma is the most common cancer, occurring mostly in the pyriform sinus (75 percent), in the pharyngeal wall (20 percent), and in the postcricoid region (5 percent). The disease usually presents in an advanced stage with enlarged cervical lymph nodes and is usually managed by radical neck dissection and pharyngolaryngectomy followed by irradiation.

The Maxillary Sinus These rare tumors are more common in men and include epidermoid carcinoma of the true antrum or secondary to upper gingival invasion, chondrosarcoma, osteosarcoma, Ewing's sarcoma, Burkitt's lymphoma, and rarely adenocarcinoma (and

If you have any questions, call or write the Surgical Oncology Program at the University of Maryland Medical Systems, Room N13E02, Baltimore, Maryland 21201 (301-328-5224).

cylindroma) or plasmacytoma. Surgery and postoperative irradiation are indicated in patients with epidermoid carcinomas and adenocarcinomas. Osteosarcomas and chondrosarcomas are managed with wide local resections. Maxillectomy is the treatment of choice for carcinomas confined to the antrum. Inferiorly located carcinoma of the maxillary sinus has the best chance for cure, while posterior tumors have the poorest prognosis. Lesions of the anterior wall of the sinus require excision of all the structures under the skin of the cheek. If such lesions have broken through the wall of the sinus, the skin of the cheek must be included in the resection. Carcinomas that involve the roof of the sinus require orbital exenteration. If the tumor invades the anterior ethmoidal sinus, the nasal septum and the entire ethmoidal sinus should be removed. If the tumor extends through the posterior wall of the antrum, the pterygoid plate is to be resected with the maxilla as well as the ethmoidal sinus. On the other hand, Ewing's sarcoma, Burkitt's lymphoma, and plasmacytoma are managed by irradiation and systemic chemotherapy.

Tumor Conferences are held weekly on Tuesday between 8–9 AM in Room N13E28 at the University of Maryland Hospital. This is an open meeting and physicians are welcome to attend. Physicians can present cases, but please call 328-5224 by noon Monday to obtain time on the schedule for your case(s) and bring the pathological slides with you.

E. GEORGE ELIAS **MD**
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The Role of Exercise in Blood Pressure Control

DONALD O. FEDDER DrPH

Exercise is an integral part of the overall treatment plan for hypertension. When properly prescribed and used in conjunction with appropriate diet, it may reduce or eliminate the need for antihypertensive drug therapy.

Dr. Fedder is Associate Professor and Director, Community Pharmacy Programs, School of Pharmacy, and Research Associate Professor, School of Medicine, University of Maryland at Baltimore; and Chairman, Maryland Commission on High Blood Pressure and Related Cardiovascular Risk Factors.

The Maryland Commission on High Blood Pressure and Related Cardiovascular Risk Factors, in assuming expanded responsibilities and in keeping with its charge to provide guidelines for blood pressure (BP) control in Maryland, reviewed the literature on several controllable cardiovascular risk factors and their relation to BP control. This article continues a series that previously examined cholesterol and smoking. Although convincing evidence that rigorous exercise will lower blood pressure in hypertensives is not available, our conclusion is that it is an important stratagem in treating hypertensives, especially those with mild HBP and no evidence of target organ damage. This conclusion is supported by the Subcommittee on Nonpharmacological Therapy of the 1984 Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure, which stated

> Strenuous physical exercise has been enthusiastically proposed as a means to lower blood pressure and to improve cardiovascular health. The evidence for blood pressure reduction remains weak, largely because the studies have been poorly controlled. Nevertheless, a well-conceived program of regular exercise is generally accepted as having beneficial effects that minimize overall cardiovascular risk.[1]

A major problem arises in demonstrating a direct link between exercise and lower BP because exercise beneficially affects other cardiovascular risk factors such as obesity, serum cholesterol, smoking, and excessive alcohol use; it also reduces stress and improves self-concept and self-esteem. Thus, whether exercise exerts a direct effect on the cardiovascular system, an indirect one through the modification of other risk factors, or both is difficult to determine. The cost for studies controlling for these variables appears to be prohibitive, and they may never be performed. In the meantime, exercise should be considered as a component, along with diet and medication, of a comprehensive approach for treating HBP.

HBP Commentary is contributed by the Maryland Commission on High Blood Pressure and Related Cardiovascular Risk Factors, 201 W. Preston St., Baltimore, MD 21201 (301-225-5891). Editors: R. Patterson Russell MD, Past Chairman; Donald O. Fedder PharmBS, DrPH, Chairman; and Carol Lewis MPH, ScD, Executive Director.

Types of Exercise

What is meant by "exercise"? More specifically, what exercises are appropriate for the hypertensive patient?

The two major types of exercise are dynamic and static, and the cardiovascular response to each is different. Dynamic or aerobic exercise (such as walking, jogging, running, bicycle riding, and swimming) involves repetitive activities of large muscle groups performed with little resistance to movement and results in changes in muscle length with minimal change in tension. Cardiac output increases in response to an increased demand for oxygen by the muscles and is mediated through increased venous return and sympathetic stimulation of heart rate and myocardial contractility. As a result, during dynamic exercise, systolic blood pressure (SBP) increases.

Total peripheral resistance (TPR) falls during dynamic exercise because of local vasodilation within the exercising muscles, resulting in either a small rise or more often a decrease in diastolic blood pressure (DBP). Following dynamic exercise, the decrease in TPR persists, and both SBP and DBP tend to remain lower than pre-exercise levels for at least 90 minutes.[2] Persons who exercise regularly over time and who achieve a "trained" (or conditioned) status generally have a reduced resting heart rate, indicating a more efficient pumping action. This may be reason enough for the recommendation of regular dynamic exercise for many patients with or without HBP.

Static (isometric) exercise, on the other hand, involves sustained activity with concomitant increase in muscle tension with or without altering muscle length. Here, both systolic and diastolic BP increase dramatically due to an increase in both cardiac output **and** total peripheral resistance. In fact, during intense static exercise such as weight lifting, levels in excess of 300/160 mm Hg have been recorded. For this reason, it has been widely believed that isometric exercise should be avoided by hypertensive and cardiac rehabilitation patients. More recently Kelemen and others have used circuit weight training in a carefully monitored cardiac rehabilitation program without complications.[3] However, there is continued concern about **unsupervised** weight-lifting programs such as those encountered at many commercial gyms, since persons often begin to compete with themselves and use increasingly heavier weights. Use of light weights with frequent repetitions of the exercise is generally better tolerated but only by patients who are not otherwise compromised.

Mechanism of BP Reduction

The mechanism of repeated dynamic exercise in lowering BP is not well studied. There are many plausible explanations: decrements in body fat[4,5] and sympathetic nervous system activity[4,6-13] are best supported by the medical literature. In the course of an exercise regimen many persons alter their diet and reduce alcohol consumption and smoking. A decrease in sodium intake combined with increased sodium loss by sweating during repeated exercise may account for a hypotensive effect, especially in salt sensitive individuals.[2] While these changes do occur with physical conditioning, their specific role in decreasing BP remains speculative.

Clinical Trials

Clinical trials of dynamic exercise in the treatment of hypertension suffer from either a lack of adequate controls or small numbers, but even so, results point to the efficacy of exercise in HBP management. Two studies comparing untreated borderline hypertensives and treated hypertensives with normotensive controls in six-month dynamic conditioning programs demonstrated significant lowering of SBP (at rest and during exercise) once the subjects reached "trained" status.[14]

Due to the potential for marked increase in blood pressure, isometric training in persons with hypertension has not been well studied. However, resistive exercise, using light weights and frequent repetitions, has been shown to decrease resting BP in normotensive women after 16 weeks of training.[15]

There is evidence that both dynamic exercise and training with a static component, when performed regularly, benefit subgroups of hypertensive patients.[16] Whether exercise has an antihypertensive effect independent of other nonpharmacological interventions is unclear. Patients willing to accept an exercise program as part of their HBP therapy regimen must be monitored to determine whether they achieve acceptable levels of control. Persons with moderate to severe hypertension ($\geq$105 mmHg) should be placed on drug therapy and reasonably controlled before embarking on exercise training.[17]

Our experience in the Hypertension Clinic, University of Maryland Health Center, is that almost all patients can be prescribed a minimal walking program, consisting of 10 to 20 minutes of brisk walking 3 to 5 days a week. However, more rigorous exercise, including supervised circuit weight training, should be preceded by a submaximal stress test under medical supervision.

Antihypertensive Therapy and Exercise

Special considerations are required when prescribing antihypertensive drugs for persons who regularly exercise as well as prescribing exercise to persons on antihypertensive drugs. Diuretics, sympathetic-inhibiting drugs, and vasodilators all interact with the hemodynamic responses to exercise.[2] All available antihypertensive drugs can produce side effects that may limit exercise capacity, but this does not mean that exercise is contraindicated. A review of drug action and careful titration of the therapy by the frequent monitoring of the patient are required for the best patient outcome.

Conclusions

Exercise should be considered as an integral part of the overall treatment plan for hypertension. When exercise is properly prescribed and used in conjunction with other nonpharmacologic interventions, it may be possible to reduce or even eliminate drug therapy. However, it is important that the clinician be as firm in providing the patient with education and monitoring of the exercise prescription as he/she is with drug therapy. Prescribing modification of risk factors and monitoring a patient's efforts to achieve this change in behavior is as much a part of HBP management as is prescribing and monitoring medication.

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One Minute with Diabetes

Jet Injectors

Doctor, I have heard jet injectors are available that will allow me to administer my insulin without a needle piercing my skin. Can I use such a device, and where can I buy it? How much does it cost, and will my health insurance program pay for it?

First, jet injectors have been used to place medications under the skin for more than 40 years. In the beginning they were bulky, inaccurate, and temperamental devices. With time they have been reduced to about 6 inches in length and about 1.5 inches in diameter. They weigh slightly less than a pound. All currently available use spring pressure and must be wound up before each use. All use an adapter that fits to your bottle of insulin. Just as you learned the technique for making an insulin injection with a syringe you must be taught the technique for using a jet injector. With proper technique, a measured dose of insulin can be administered accurately.

To answer your second question, several manufacturers of jet injectors are

- DERATA Corporation, 7380 32nd Ave. N., Minneapolis, MN 55427
- Ulster Scientific, Inc., PO Box #902, Highland, NY
- Vitajet Precision Instruments, Inc., 917 Glenneyre St, Laguna Beach, CA 92601

You might want to write them for descriptive literature.

Jet injectors sell for $500 to $800. Finally, if your health insurance program pays for your syringes now, it probably will pay for one. It would be wise to confirm insurance coverage by your company before purchasing a device.

A jet injector is not just for people who are afraid of taking needles. It is a tool that can be used to improve compliance with a daily insulin regimen. In considering the purchase of an injector ask:

- does the purchase include product training?
- are supplies such as adapters, bottle holders, etc. readily available?
- does the company allow a ten-day trial?

Whether the jet injector is for you will depend on the extent of your fear of disposable syringe injections and your willingness to master a somewhat more complicated tool for administering insulin.

DeWITT E. DeLAWTER **MD**
Editor

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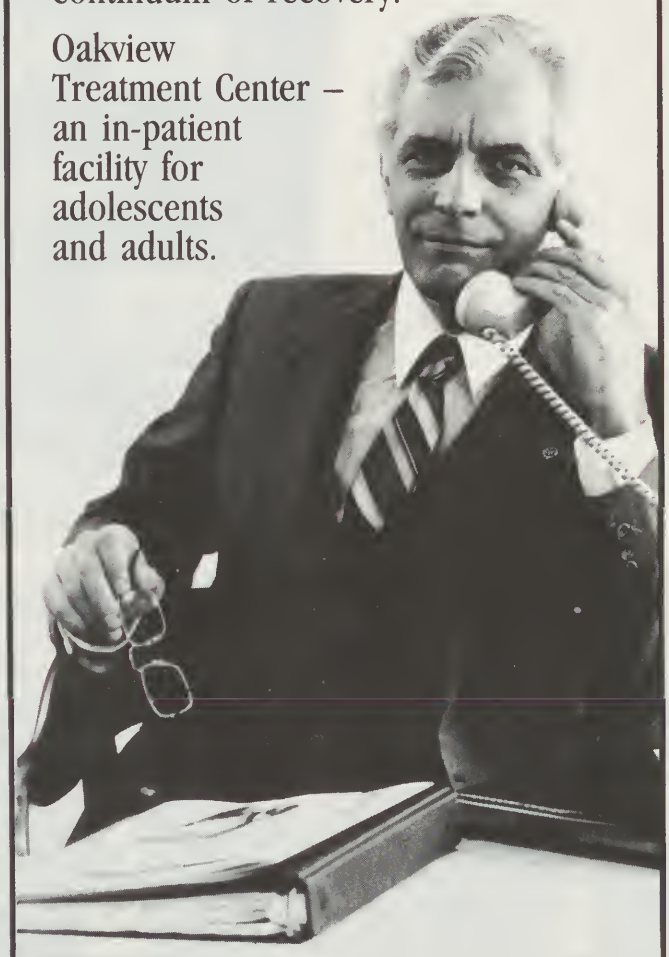
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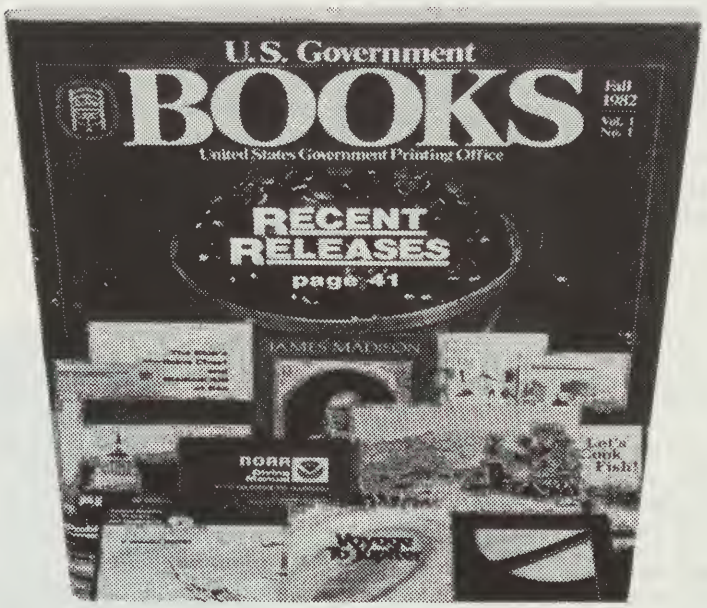
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BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR.)*

INDERAL® LA brand of propranolol hydrochloride **(Long Acting Capsules)**

DESCRIPTION. INDERAL LA is formulated to provide a sustained release of propranolol hydrochloride. INDERAL LA is available as 60 mg, 80 mg, 120 mg, and 160 mg capsules.

CLINICAL PHARMACOLOGY. INDERAL is a nonselective, beta-adrenergic receptor-blocking agent possessing no other autonomic nervous system activity. It specifically competes with beta-adrenergic receptor-stimulating agents for available receptor sites. When access to beta-receptor sites is blocked by INDERAL, the chronotropic, inotropic, and vasodilator responses to beta-adrenergic stimulation are decreased proportionately.

INDERAL LA Capsules (60, 80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with INDERAL LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of INDERAL Tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially.

INDERAL LA should not be considered a simple mg-for-mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to INDERAL LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, INDERAL LA has been therapeutically equivalent to the same mg dose of conventional INDERAL as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure and rate pressure product. INDERAL LA can provide effective beta blockade for a 24-hour period.

INDICATIONS AND USAGE. Hypertension: INDERAL LA is indicated in the management of hypertension; it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. INDERAL LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: INDERAL LA is indicated for the long-term management of patients with angina pectoris.

Migraine: INDERAL LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

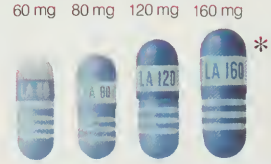
CONTRAINDICATIONS. INDERAL is contraindicated in 1) cardiogenic shock; 2) sinus bradycardia and greater than first-degree block; 3) bronchial asthma, 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.

ONCE-DAILY

INDERAL® LA

(PROPRANOLOL HCl)

LONG ACTING CAPSULES



WARNINGS. CARDIAC FAILURE: Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or INDERAL should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following *abrupt* discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned, the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (eg, chronic bronchitis, emphysema) — PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY: The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, eg, dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA: Beta blockers should be used with caution in diabetic patients if a beta-blocking agent is required. Beta blockers may mask tachycardia occurring with hypoglycemia, but other manifestations such as dizziness and sweating may not be significantly affected. Following insulin-induced hypoglycemia, propranolol may cause a delay in the recovery of blood glucose to normal levels.

THYROTOXICOSIS: Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol may change thyroid function tests, increasing T_4 and reverse T_3, and decreasing T_3.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case, this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS. GENERAL: Propranolol should be used with caution in patients with impaired hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta-adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be told that INDERAL may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

CLINICAL LABORATORY TESTS: Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS: Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if INDERAL is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

Caution should be exercised when patients receiving a beta blocker are administered a calcium-channel-blocking drug, especially intravenous verapamil, for both agents may depress myocardial contractility or atrioventricular conduction. On rare occasions, the concomitant intravenous use of a beta blocker and verapamil has resulted in serious adverse reactions, especially in patients with severe cardiomyopathy, congestive heart failure or recent myocardial infarction.

Aluminum hydroxide gel greatly reduces intestinal absorption of propranolol.

Ethanol slows the rate of absorption of propranolol.

Phenytoin, phenobarbitone, and *rifampin* accelerate propranolol clearance.

Chlorpromazine, when used concomitantly with propranolol, results in increased plasma levels of both drugs.

Antipyrine and *lidocaine* have reduced clearance when used concomitantly with propranolol.

Thyroxine may result in a lower than expected T_3 concentration when used concomitantly with propranolol.

Cimetidine decreases the hepatic metabolism of propranolol, delaying elimination and increasing blood levels.

Theophylline clearance is reduced when used concomitantly with propranolol.

CARCINOGENESIS, MUTAGENESIS, IMPAIRMENT OF FERTILITY: Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

PREGNANCY: Pregnancy Category C. INDERAL has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose. There are no adequate and well-controlled studies in pregnant women. INDERAL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

NURSING MOTHERS: INDERAL is excreted in human milk. Caution should be exercised when INDERAL (propranolol HCl) is administered to a nursing woman.

PEDIATRIC USE: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular: Bradycardia; congestive heart failure; intensification of AV block; hypotension; paresthesia of hands; thrombocytopenic purpura; arterial insufficiency, usually of the Raynaud type.

Central Nervous System: Light-headedness; mental depression manifested by insomnia, lassitude, weakness, fatigue; reversible mental depression progressing to catatonia; visual disturbances; hallucinations; vivid dreams; an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics. For immediate formulations, fatigue, lethargy, and vivid dreams appear dose related.

Gastrointestinal: Nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: Pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: Bronchospasm.

Hematologic: Agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-Immune: In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous: Alopecia, LE-like reactions, psoriasiform rashes, dry eyes, male impotence, and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.

DOSAGE AND ADMINISTRATION. INDERAL LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily. If patients are switched from INDERAL Tablets to INDERAL LA Capsules, care should be taken to assure that the desired therapeutic effect is maintained. INDERAL LA should not be considered a simple mg-for-mg substitute for INDERAL. INDERAL LA has different kinetics and produces lower blood levels. Retitration may be necessary, especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION — *Dosage must be individualized.* The usual initial dosage is 80 mg INDERAL LA once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg once daily or higher until adequate blood-pressure control is achieved. The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

ANGINA PECTORIS — *Dosage must be individualized.* Starting with 80 mg INDERAL LA once daily, dosage should be gradually increased at three- to seven-day intervals until optimal response is obtained. Although individual patients may respond at any dosage level, the average optimal dosage appears to be 160 mg once daily. In angina pectoris, the value and safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS).

MIGRAINE — *Dosage must be individualized.* The initial oral dose is 80 mg INDERAL LA once daily. The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimal migraine prophylaxis. If a satisfactory response is not obtained within four to six weeks after reaching the maximal dose, INDERAL LA therapy should be discontinued. It may be advisable to withdraw the drug gradually over a period of several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS — 80-160 mg INDERAL LA once daily.

PEDIATRIC DOSAGE — At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

*The appearance of these capsules is a registered trademark of Ayerst Laboratories.

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Incidental Appendectomy: The Controversy

GWEN COOPER MD, W. SCOTT TAYLOR MD, and PHILLIP J. GOLDSTEIN MD

The diagnosis of appendicitis can be elusive, particularly with an extensive differential diagnosis in the premenopausal woman. An error in medical judgment can be devastating and can result in limited reproductive potential, in other types of morbidity, and even in death. The literature supports the opinion that prophylactic appendectomy is a safe procedure in gynecologic and obstetric surgery and should be performed unless the patient's condition or access to the appendix contraindicates removal.[1]

From the Department of Obstetrics and Gynecology, Sinai Hospital of Baltimore.

In women the differential diagnosis of appendicitis includes obstetrical as well as gynecologic conditions that can present with similar clinical findings, for example, pelvic inflammatory disease or adnexal torsion.

The overall lifetime risk of women developing appendicitis ranges from 1/6 at birth, rises to 1/99 in ages 15–19, and falls to 1/50 at age 50. For women, the death rate secondary to acute appendicitis is 1/1100 for all ages up to 80 years old.

The literature supports the opinion that an incidental appendectomy is a safe procedure in gynecologic and obstetric surgery, and that it should be performed unless the patient's condition or access to the appendix contraindicates removal.[1] Three accepted indications for incidental appendectomy are

1. To reduce future mortality and morbidity from appendicitis, including infertility following a perforated appendix.
2. To eliminate undiagnosed incidental pathology in the appendix.
3. To eliminate the appendix from diagnostic consideration when the patient has abdominal or pelvic complaints in the immediate postoperative period, and in future years.[1]

The premise that the appendix is a vestigial, functionless organ is the basis for prophylactic appendectomy, otherwise appendectomy would not be justifiable. Although there are theories that the lymphoid tissue within the appendix may exert a protective function, no clinical evidence is available at present.[2] As Silvert noted in 1976,

> the vermiform appendix ... has been considered singularly devoid of any useful function ... the privilege of its amputation has rewarded many a fledgling physician for his patient pulling of retractors.[2]

Other arguments for incidental appendectomy include the technical ease of removal and the low morbidity of the procedure. The patient already undergoing an anesthetic risk for the primary procedure may be spared a subsequent operation.

Although the appendix usually is accessible, most gynecologic surgeons do not remove it given the opportunity. Reasons include the reluctance to remove a normal appearing organ, fear of possible complications, potential legal liability, and unfamiliarity with the surgical technique.

Clinical Presentation

Appendicitis results from obstruction followed by inflammation. The abdominal pain of appendicitis can be variable but most often localizes to the right lower quadrant (RLQ). The appendix and the small bowel have the same nerve supply, visceral pain being first noted in the epigastrium or periumbilical area. In 50 percent of patients there also may be anorexia, nausea, and vomiting. Most difficult to diagnose is disease in the elderly and in young children, both of whom have a higher incidence of appendiceal perforation.

Physical examination may be remarkable for tenderness to direct palpation, rebound, and guarding in the RLQ. Occasionally, a pelvic mass can be palpated. Localizing signs may vary due to the varying site of the appendix. The appendix is located at the pelvic brim or low in the pelvis in 30 percent of patients and retrocecally in 5 percent.

Laboratory data generally are not helpful except to rule out other disorders such as ectopic pregnancy. Abdominal x-rays, sonogram, and barium enemas have not proved helpful. The false-negative rate of barium enemas is about 10 percent.[3] Laparoscopy has been shown to be helpful in differentiating between gynecological disease and appendicitis with a low false-negative rate for the latter.[4]

The treatment of acute appendicitis is appendectomy. The abdominal incision used depends on the patient's clinical presentation and health status. Obviously if gynecological considerations exist, the incision should be accommodating, that is, Pfannenstiel or vertical.

Pathology

Anderson *et al.* in 1980 retrospectively studied 454 patients subjected to laparotomy for suspected acute appendicitis. Twenty-five percent had a normal appendix. The incidence of false positive was twice as common in females as in males. The most common diagnosis of the false-positive group was "other abnormality, no pathologic findings," and "lymphadenitis mesenterica." In 7.9 percent, a gynecologic condition was found at the time of surgery.

Hyperplasia of submucosal lymphoid follicles or "lymphadenitis mesenterica" accounts for approximately 60 percent of false-positive cases. Thirty-five percent are attributable to the presence of fecal stasis,

or a fecalith, 4 percent to other foreign bodies, and 1 percent to tumors involving the cecum or appendix.

The appendix is the most common site of carcinoid tumors. The incidence of such tumors is 0.03 percent of all appendices removed. Almost all are benign.

Westermann *et al.* in 1986 did a retrospective review of incidental appendectomy done at the time of gynecologic surgery for both benign and malignant disease. Definite pathology was found in 14.6 percent of specimens and equivocal findings in another 14 percent. The most common pathologic diagnosis in this series was metastatic cancer of the ovary. Endometriosis was the second most common diagnosis. No procedure-related morbidity was encountered.[5] The appendix is a frequent site of involvement with pelvic endometriosis. Pittaway in 1983 found 13 percent of 104 patients with endometriosis had endometriotic appendiceal implants. In a review of 500 consecutive appendectomies, 38 percent of appendicies with histologic evidence of endometriosis had a normal appearance.[6]

Silberman in 1981 reported a retrospective analysis of 1,028 appendectomies, 15 of which were incidental procedures, leaving 1,013 patients with preoperative diagnosis of acute appendicitis. The diagnosis was not correct in 15 percent. In 21 percent of the "normal appendices" gynecologic disease was present. There were twice as many female as male patients in the normal appendix group.[7]

In 1985 a prospective analysis by Bongard *et al.* of the differential diagnosis of appendicitis and pelvic inflammatory disease concluded that in women 15 to 45 years old there is a higher negative appendectomy rate. Close attention to several criteria including duration of symptoms, presence of nausea and/or vomiting, a history of sexually transmitted disease, cervical motion tenderness, adnexal tenderness, and isolated peritoneal signs in the right lower quadrant may help differentiate between the two diagnoses.[4]

In a series of 532 incidental appendectomies reported by Taniguchi, 9.6 percent were catarrhal appendicitis and 0.9 percent subacute or early acute appendicitis.[8] Melcher reported 33 abnormal appendices in 45 incidental appendectomies. Pathological findings included acute, subacute, and chronic appendicitis; carcinoid tumors, and endometriosis.[9]

In 1974 Moertel *et al.*, in a controlled prospective study, reported no increased susceptibility for development of cancer in those patients who had had appendectomies. They collected data on 3,722 patients divided into control and appendectomy groups with a significant proportion greater than forty years old at time of appendectomy.[10]

Appendix and Pregnancy

Babler stated in 1908, "The mortality of appendicitis complicating pregnancy is the mortality of delay."[11] The incidence of appendicitis complicating pregnancy varies from 1/355 to 1/11,479 pregnancies. Babaknia found the incidence of appendicitis to be 1 in 1,500 pregnancies over a 12 year period.[12]

Appendicitis is the most common acute abdominal condition requiring operation during pregnancy. Symptoms include abdominal pain, abortion or fetal death, anorexia, nausea and/or vomiting, fever and/or chills, particularly with perforation, and urinary symptoms.

The differential diagnosis is difficult because of nonlocalizing symptoms. One reason is progressive displacement of the appendix by the enlarging uterus and a clockwise rotation of the tip into the right upper quadrant. Delay is common and arises from the hesitancy to perform a major surgical procedure on a pregnant patient for fear of maternal and fetal morbidity and mortality.

A major confusing situation is acute appendicitis in labor. Generally, if delivery is imminent, one may accomplish the delivery and then perform exploratory laparotomy. Another option is an extraperitoneal cesarean section and appendectomy after closure of the incision. In acute appendicitis without perforation, a transperitoneal cesarean section probably carries no additional morbidity. There are no studies examining the most optimal options in management.

Should a cesarean section be done at the time of appendectomy for appendicitis? Each case should be evaluated on its own merit: previous cesarean, gestational age, patient status, and desire for permanent sterilization. Potential major complications associated with an appendectomy in pregnancy are premature labor, wound infection, and pelvis abscess. The incidence of perforation increases to 70 percent past the first 24 hours of symptoms. If there is an abscess, particularly in the second or third trimester, the uterus often is intimately involved as "an abscess wall." In Babaknia's study of over 300 patients, 70 had ruptured their appendix, and there was three maternal deaths.[12]

Significant pyuria in catheterized specimens with subsequent negative cultures may be attributable to the close proximity of the appendix to the abdominal retroperitoneal ureter in the second and third trimester. This is an interesting idea but no proof is offered.[12]

The low maternal morbidity probably is the result of early diagnosis, better surgical technique, antibiotics, and anesthesia coverage.[1]

In 1959 Sweeney reviewed 230 elective cesarean sections with appendectomies and 230 without an appendectomy. He found no significant differences between

the two groups including no difference in postoperative febrile morbidity or duration of hospitalization.[13] In 1983 Parsons did a controlled clinical trial of 40 consecutive consenting patients who had elective cesarean with appendectomy and 40 without. There was no significant difference in postoperative morbidity. A fifth of the appendices were abnormal.[14] Onuigbo reviewed the pathology from 100 appendices at elective cesarean sections, and concluded that half these specimens had evidence of an inflammatory process. Further pathological definition was not available.[15]

It has been suggested that incidental appendectomy *not* be done in those cesarean sections in which there has been prolonged labor, prolonged rupture of membranes, or chorioamnionitis. Again there are no systemic studies on appendectomy in complicated obstetrical cases.

The Appendix and Infertility

Wiig *et al.* in 1979 reviewed records of 48 patients under 24 years old. In those who had appendicitis with perforation 19 percent were infertile. If there was abscess formation, 31 percent were infertile. The control group of 58 patients revealed 12 percent were infertile.[16] Powell in 1965 reported an increase in the incidence of infertility following appendicitis. However, his study does not reflect previous history of pelvic inflammatory disease or male infertility among his patients.[17]

There is no controlled clinical study on whether incidental appendectomy has an adverse effect on fertility when performed at the time of an operation done to enhance fertility. However, because of the possibility of a mild subclinical peritonitis, the recommendation is *not* to remove the appendix unless there is evident pathology present.

Geerdsen and Hansen in 1977 did a retrospective analysis of 78 women who had an appendectomy in childhood less than or equal to 15 years of age with no previous surgery. Thirty nine of them had an acute perforation; an equal number did not. There was no statistical difference in the incidence of infertility between the two groups. However, when compared to the other papers on the subject, the incidence of infertility in those with an acute perforated appendix was higher than expected.[18]

In 1983 Puri *et al.* reviewed 103 cases in an attempt to refute the claim that perforated appendicitis increased the incidence of infertility. He indeed showed that other infertility factors may be more important in this group of patients than is a history of an appendectomy.[19]

Mueller *et al.* in 1986 reported in the *New England Journal of Medicine* that a ruptured appendix was associated with a significant increase in the relative risk of tubal infertility in nulliparous women versus multiparous women. There was no significant risk of tubal infertility with a simple appendectomy without rupture. They controlled for age, intrauterine device use, and pelvic inflammatory disease.[20]

Sinai Hospital Experience

A retrospective review of all appendices removed at Sinai Hospital of Baltimore in 1984 was conducted. One hundred nineteen patient records were evaluated. The Table demonstrates that there were 18 negative laparotomies for the diagnosis of appendicitis in men and 34 in women.

In women, the false positives included: diverticulitis (3), endometriosis (3), hemorrhage (4), fibrous obliteration (7), decidual reaction (2), pelvic inflammatory disease (6), mesenteric adenitis (1), and cancer (3). As previously reported women had almost twice as many negative laparotomies (for appendicitis) as men.

Two patients recuperating from cesarean sections, at three weeks and at five days, respectively, underwent exploratory laparotomy for suspected appendicitis. The diagnosis was confirmed in the former. A third obstetrical patient underwent exploratory laparotomy at an estimated gestational age of 26 weeks for suspected appendicitis. Pathology revealed intraluminal hemorrhage and congestion. The primary preop diagnosis in these patients was an acute abdomen, rule out appendicitis. At the time of the primary gynecological procedure an appendectomy was performed because of some associated abnormality in nine women. Such abnormalities included endometriosis and adhesion formation.

Summary

In a number of studies summarized by Silvert *et al.* from 1951 to 1973, there seems to be no increase in morbidity or mortality in cases of incidental appendectomy performed in conjunction with various operations on women including cesarean sections, tubal ligations, cholecystectomy, or herniorraphy.[2]

A consistent finding in most reported series concerning incidental appendectomy is that between 10 and 15 percent of excised appendices show evidence of some

Table. Sinai Study (N = 119)

	Cases	Positive Appendix	Negative Appendix
Males	61 (51%)	43 (36%) (6*)	18 (15%)
Females	58 (48%)	24 (20%) (9*)	34 (28%)

* ruptured.

abnormality. Another major consideration in incidental appendectomy is to remove the appendix from future diagnostic consideration.

The decision to perform a prophylactic appendectomy requires surgical judgment, discrimination, and of course the informed consent of the patient. Incidental appendectomy could not be justified if it could not be done safely. The complication rate is not negligible, but it is low enough to justify routine appendectomy in elective surgery. Complications include bleeding, adhesion formation, intestinal obstruction, "blow-out" of the appendiceal stump, and abscess or fistula formation. Each physician and patient must review the available information and come to an appropriate decision. The advantages would seem to be many and the disadvantages few.

Primum non nocere.

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Diabetes Education at a Community Hospital

DeWITT E. DeLAWTER MD

The increasing cost of health care has made it necessary to curtail the long-standing habit of admitting all patients with newly diagnosed diabetes mellitus to a hospital for a week's education and treatment.[1] Not all patients with diabetic complications need hospital care. Many physicians unable to spend the time for individual patient education are using intensive outpatient education programs once they appreciate their effectiveness.

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For years, local diabetes associations have offered brief seminars on various phases of diabetes management, conducted by volunteer instructors, with varying degrees of success. Almost never is an individual consultation available to assess specific needs.

Inpatient education usually provides instruction in survival skills consisting of basic meal planning and insulin injection technique.

The Diabetes Education Program at Suburban Hospital was developed in two parts: an intensive outpatient program covering all phases of diabetes management and a brief "Instruction of Essentials," or crisis inpatient program. Outpatient classes began in March 1986 as a five-day (40 hours), broad-based, team-approach program. After a few months an abbreviated program of a four-hour session once a week for five weeks was added.

Anyone with diabetes and able to commute to the teaching facility may enroll, and spouses or other family members are urged to attend. While a review of and an evaluation by the first 35 participants was positive, the program is being improved as more data and experience become available.

Evolution of Program

From 1946 until 1980 Suburban Hospital, a community hospital of 300 beds, had an outpatient diabetes education program restricted to the patients attending its clinic. Breakfast, provided free by the hospital, was supervised by a dietitian and was the most worthwhile portion of the dietary instruction. It eliminated brown-bagging sandwiches as well as frequent visits to the food vending machines. Patients were taught the essentials of general diabetic care in groups. A podiatrist examined and treated each patient at least twice a year. With an attendance of up to 100 patients per session, the program was inadequate because of the size of the group, limited teaching facilities, and lack of patient motivation.

Inpatient diabetes education programs were impaired because the patients often had a concurrent illness that precluded cooperation and attentiveness. Bedside teaching on a one-on-one basis was often rushed and incomplete. Television, telephone calls, and visitors were also distracting. There was no specially trained staff to teach the fundamentals of diabetic management, although some nurses and dietitians became very proficient at the task. The benefits of instruction with food models, slides, and the blackboard were not available in such situations. Often instruction prior to discharge was not available on weekends or holidays if the hospital was short of staff.

Suburban's Programs

After several years of planning, in March 1986 Suburban Hospital began an outpatient diabetes education program open to anyone in the community. The program was planned to cover all phases of diabetic education. Attendees have a referring physician who supervises treatment, adjustments of diet, or drug therapy. The objectives of the program are to

- understand diabetes better
- understand meal planning
- understand the importance of exercise
- help reach practical goals in therapy
- assist the personal physician

New Outpatient Program

At first, the program consisted of five daily sessions of approximately eight hours each in one week including both breakfast and lunch (Table 1). Individual sessions on Monday afternoon dealt with special diet problems, personal problems, educational needs, and a brief physical assessment by the internist. After a few meetings, the physical assessment was discontinued because the referring physician provided that information at the time of application, and some physicians feared the internist might have increased medical liability should a medical problem be overlooked in the assessment.

The staff consists of a director, a medical director, and the teaching staff.

Director a motivated individual with a real interest in both teaching and diabetic care.

Medical Director a person with many years' experience in diabetic management. If not exclusively a diabetologist or an an endocrinologist, someone who has had many diabetic patients under his or her care.

Teaching Staff instructors with a real interest in teaching patient care and the management of individual

Table 1. Diabetes Education Program

Monday	
8:00–8:30 A.M.	Height/weight, blood pressure, Self-monitoring blood glucose Supervision of insulin injections
8:30–9:00	Breakfast
9:00–10:00	What is diabetes?
10:00–11:30	Nutrition I
11:30–12:00	Rationale for blood glucose monitoring
12:30–1:30 P.M.	Group lunch (cafeteria)
1:30–4:00	Individual Sessions A. Meal planning B. Individual assessment
Tuesday	
8:00–8:15 A.M.	Self-monitoring blood glucose Supervision of insulin injections
8:15–8:45	Breakfast
8:45–9:45	Exercise
9:45–11:00	Medications
11:00–11:15	Break
11:15–12:15 P.M.	Psychological aspects of diabetes
12:15–12:30	Self-monitoring blood glucose
12:30–1:30	Group lunch (restaurant)
1:30–3:00	Acute complications
3:00–3:30	Exercise
Wednesday	
8:00–8:15 A.M.	Self-monitoring blood glucose Supervision of insulin injections
8:15–9:00	Breakfast
9:00–10:00	Foot care
10:00–12:15	Nutrition II
12:15–12:30 P.M.	Self-monitoring blood glucose
12:30–1:30	Group lunch (restaurant)
1:30–2:30	Intermediate and long-term complications
2:30–3:00	Exercise
3:00–4:00	Individual time
Thursday	
8:00–8:15 A.M.	Self-monitoring blood glucose Supervision of insulin injections
8:15–8:45	Breakfast
8:45–9:45	Eye complications
9:45–10:45	Blood glucose meters
10:45–11:00	Break
11:00–12:00	Management of short-term illness
12:00–12:15 P.M.	Self-monitoring blood glucose
12:15–1:15	Group lunch (restaurant)
1:15–2:30	Stress management
2:30–3:00	Exercise
3:00–4:00	Individual time
Friday	
8:00–8:15 A.M.	Self-monitoring blood glucose Supervision of insulin injections
8:15–8:45	Breakfast
8:45–10:15	Nutrition III
10:15–10:30	Break
10:30–11:30	New advances and trends in diabetes
11:30–12:00	Individual evaluations of progress
12:00–12:15 P.M.	Self-monitoring blood glucose
12:15–1:15	Group lunch (cafeteria)
1:15–2:30	Coping with diabetes
2:30–3:00	Exercise
Additional breaks provided as needed	

problems are most important for the success of the program. The instructors are

Diabetes nurse educator
Dietitian
Internist
Mental health clinical nurse specialist
Physiatrist
Podiatrist
Ophthalmologist

Physicians and podiatrists provide their instruction gratis. The other instructors do inpatient instruction in addition to participating in the outpatient education program and are on the hospital payroll. The hospital allots facilities for the program at no charge.

Space availability makes it necessary to limit the participants in each group to six patients and their spouses. Spousal attendance is helpful in reinforcing the education provided and giving support in coping with diabetes.

Each attendee is provided with the class text, *Learning to Live Well with Diabetes*,[2] dietary, and other instruction material. During the program each one has the use of a glucose meter, a finger-pricking device, and an unlimited supply of lancets and glucose test strips. A number of different instruments are used permitting each individual to evaluate which is the most suitable. Twenty percent of the group have their own meters and bring them to class. By the end of the program 87 percent own meters and use them frequently. A glycohemaglobin test is performed on each attendee. Previous laboratory data such as blood lipids and urinalysis are provided by the referring physician and are not repeated in the interest of economy.

A pretest-posttest examination is done to determine what has been accomplished.[3] Each participant's record is reviewed over the five-day period to assess progress in diabetic control and understanding of the total program. Any changes that have been made in therapy by the personal physician are reviewed so that the reason for the adjustment is understood. An evaluation of the program and each instructor is done and distributed to help determine where improvements are needed.

The summary of the daily glucose monitoring, weight checks, dietary plan, and glycohemaglobin results is sent to the personal physician as soon as all the data are collected. If it is necessary for the personal physician to have some information before the summary letter arrives, the director telephones to apprise him or her of it.

Follow-up

After the completion of the program participants are encouraged to telephone the diabetes education office if there are any dietary, blood glucose monitoring, or

other problems related to the course. Approximately six weeks after completion of the course patients are asked to return on an individual basis for an evaluation of progress with the meal plan, the weight control program, and for a follow-up glycohemaglobin test for comparison with the results taken at the start of the program.

Diabetes education at Suburban Hospital is a hospital program but not a program of the medical staff, although all the physician participants are members of the medical staff. Funding was begun by a grant to the hospital from the Health Service Cost Review Commission for start-up expenses and for equipment and supplies. The charge for the program is $275. Adjustments are made depending patient's ability to pay. Spouses pay only for their meals. The operational cost per participant is about $520; the deficit is made up by donations from interested persons.

The problems in getting a greater number of attendees in this outpatient program are multiple and can be assessed as follows:

1. The charge of $275 Although it is about half the total cost of the program and equal to approximately the cost of one day of hospital care, patients expect insurance coverage and are unwilling to pay for a program from personal funds. Some insurance carriers do cover the program in part or totally. Unfortunately, the biggest carrier in our area, Blue Cross-Blue Shield does not reimburse for outpatient diabetes education. However some types of Blue Cross-Blue Shield insurance will cover inpatient education at a much greater cost.

2.The program requires a full week from work Many people cannot understand the need for that much time for a diabetes education program. However, at the terminal interview, all attendees believed the total program was needed and did not wish to have any omitted.

3. They participated in a diabetes education program a few years ago and think nothing more is needed or they had some inpatient instruction and now know everything necessary to manage their diabetes.

4. The program should be held at night Evening sessions are being considered. The District of Columbia Affiliate of the American Diabetes Association conducts evening sessions in Montgomery County. Patients who can attend only evening classes are referred there for diabetes education, although it is basic care without individualization.

5. Some personal physicians are opposed to the program All physicians have a different training background and a different bias as to the proper management of diabetes. Some do not believe self-monitoring of blood glucose is helpful. Some do not want patients taught about diet because they do not believe it to be helpful. Some like high fiber diets, others high carbohydrate, and still others high protein. Some really like "fad" diets. Our program follows the dietary recommendations of the American Diabetes Association and the American Dietetic Association, acknowledging that at this time everything is not known about diabetic management and that there are dissenters.

Because some patients are reluctant to devote the time and money for the five-day program, an abbreviated program was developed of about twenty hours over a five-week period (Table 2). This program provides no test, no glycohemaglobin test, and only one meal. The fee is $175.

New Inpatient Program

The inpatient diabetes education program consists of the diabetes nurse educator visiting diabetic patients after either notification by the staff nurses of their presence in the hospital or a physician order requesting diabetes instruction. If the visit is made after staff nurse

Table 2. Abbreviated Outpatient Diabetes Education Program

Week one	
8:45–9:00 A.M.	Blood pressure and weight
9:00–9:55 A.M.	What is diabetes?
10:00–11:30 A.M.	Nutrition I. Exchange lists for meal planning
11:35–12:30 P.M.	Self-monitoring blood glucose
1:30–2:30 P.M.	Insulin injection instruction
Week two	
8:45–9:00 A.M.	Blood pressure and weight
9:00–9:55 A.M.	Acute complications Short-term illness
10:15–11:30 A.M.	Nutrition II. Weight control, lipids
11:35–12:30 P.M.	Exercise and its need
Week three	
8:45–9:00 A.M.	Blood pressure and weight
9:00–9:55 A.M.	Long-term complications
10:00–10:55 A.M.	Coping with diabetes
11:00–12:30 P.M.	Nutrition III. Complex carbohydrates, fiber, and alcohol
Week four	
8:45–9:00 A.M.	Blood pressure and weight
9:00–9:55 A.M.	Medications
10:00–10:55 A.M.	Foot care
11:00–12:00 Noon	Stress management
Week five	
8:45–9:00 A.M.	Blood pressure and weight
9:00–9:50 A.M.	New advances in diabetes
10:00–10:55 A.M.	Nutrition IV. Reading labels and dining out
11:00–12:00 Noon	Healthy living
12:00–12:30 P.M.	Posttest questions and review
Individual time instruction provided as necessary	
Breaks provided as needed	

notification, the patient is informed about the availability of a diabetes instruction program by the nurse educator and the dietitian. The physician is asked to write an order requesting it. If an order is written, instruction begins; if not, no further contact is made. The program is conducted in the classroom of the Diabetes Education unit (Table 3). The dietary staff carries out its program, on request, independently.

Because patients do not remain in the hospital a full week to complete the program and are unwilling to return after discharge, this plan has shortcomings. Other procedures such as surgery, physical medicine, X-rays, and laboratory studies have higher priority for the patients' time than does diabetes education. The compromise is bedside instruction as it can be worked into the schedule. This is frustrating for the dietitian and the nurse educator, but worst of all it gives many patients and physicians the impression that all necessary education has been accomplished. Patients are informed that what is being done is "crisis management" and not a replacement for an adequate diabetes education program, which should be carried out as soon as possible after recovery from the current medical problem. The hospital charges $30 for this instruction.

Table 3. Inpatient Diabetes Education Program

Day	Time	Subject
Monday	2–3 P.M.	Understanding diabetes
Tuesday	2–3 P.M.	Understanding meal planning
Wednesday	2–3 P.M.	Insulin administration
Thursday	2–3 P.M.	Glucose monitoring
Friday	2–3 P.M.	Diabetic emergencies

Advisory Board

In planning a diabetes education program it was apparent an advisory board was needed to control our eagerness to proceed before fully appreciating all the ramifications that might result. The director and medical director were on the board by reason of their position. In addition a physician and a businessman, each having diabetes, were selected. Other members were a dietitian and a mental health clinical nurse specialist.

The board meets bimonthly. It reviews the budget, the results of the courses of the previous months, and patient critiques. It discusses public relations and proposed changes in future programs. As the board evolves it will be better to have more participation by consumers, public relations and business-oriented people and less by staff who conduct the program.

Results

About 80 percent of the attendees were middle aged, obese, and noninsulin dependent while the remainder were normal weight with one exception, a thin, 83-year-old female who was sixteen pounds underweight. Basic information collected from the first 35 outpatients is of interest:

Time	Total Weight*			Glycohemaglobin Test**	Knowledge Test
	Lost	Same	Gained		
First day	—	—	—	10.35%	75%
After 5 days	72(31)	1(1)	4(2)	—	87%
After 6 weeks	101(24)	1(1)	9(9)	9.00%	—

* (34) patients. (1) underweight patient omitted who gained a planned 16 lbs over 6 weeks

** Normal glycohemaglobin in this laboratory is 5.5%–9.0%

Most patients on Sulfonylurea therapy had a reduction in their dosage, while those taking insulin had more of a shift in amount of insulin used at different times of the day rather than a reduction in total units used.

A National Plan

The American Association of Diabetes Educators has designed a certification plan for the staff of educators of all facilities conducting diabetes education to assure that all instructors meet a basis of qualification and that all attendees are instructed by appropriate personnel. The address for queries about certification is

American Association of Diabetes Educators
500 North Michigan Avenue
Chicago, IL 60611

The American Diabetes Association's program to officially recognize diabetes patient education programs is now under way. All diabetes education facilities should seek recognition for the sake of quality control as well as acceptance for third-party reimbursement when the value of the programs is appreciated. The address for seeking facility recognition is

Recognition Program
American Diabetes Association
National Service Center
1660 Duke Street
Alexandria, VA 22314

Discussion

After the initial shock of the diagnosis of diabetes and the willingness to cooperate fully because of the

fear of the unknown, most patients gradually develop a strange complacency. Because diabetes does not produce acute pain, a great amount of denial follows. If the patient is fortunate to be placed in a good diabetes education program during the period of acceptance, much can be accomplished.[4–6] There is some disagreement as to how this can be measured accurately. If one can understand that healthy living is remunerative in the long run and really not difficult to manage, life certainly can be enjoyable. It is encouraging to hear a patient say, "At last, I know how to use a meal plan" or "I can eat out without cheating" at the end of the course.

In a random sample, less than 50 percent of diabetic patients adhered to medical advice. After an adequate diabetes education course, 20 percent adhere fully, 60 percent adhere partially, and 20 percent are nonadherent.[7,8]

If a patient does not get a proper start in the management of diabetes denial, disinterest, depression, and a hatred for the condition seem to get worse with time. Only when a crisis or a serious complication develops can they be shocked into cooperating and taking an interest in intelligent care.

Unfortunately, the insidious complications often are not reversible. The remaining years of discomfort and handicaps are the penalties for neglected management.

Two hundred years after it became known that diet and weight control would improve the diabetic state, some physicians do not believe it enough to encourage their patients to receive proper meal plan instruction.[9]

Sixty-five years after the discovery of insulin, it is common to observe inadequate and improper use of it. The newer and better insulins necessitate the reevaluation of insulin administration patterns.[10–12]

More than twenty years after the introduction of self-monitoring of blood glucose and its widely accepted usefulness in obtaining better control of diabetes there are some patients, physicians, and hospitals that do not use it.[13]

Our graduates request the formation of follow-up support groups to meet every few months, and an annual one-day "Diabetes Update" for those who have completed the basic course is being considered.

It would greatly benefit diabetic patients and their families if each community developed a diabetes education unit in its hospital, health department, or health maintenance organization whose staff meets certification requirements and whose program becomes recognized by the reviewing organizations.

Conclusions

Diabetes education is a necessary and valuable tool in the management of diabetes.

The basic responsibility of diabetes educators is to insure that their patients are able to manage their diabetes. It is the physicians responsibility to recognize which patients need further information about the proper management of their diabetes, to impress on them the importance of having the information, and to direct them to a place offering that training.

Health insurance program managers need to see the advantages of reimbursement for outpatient diabetes education as a means of decreasing the number of days diabetic patients spend in the hospital.

It is must be recognized that not all diabetic patients are willing to accept the responsibility of self-care and some are not educable; these people will not benefit by any diabetes education program.

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A Health-Care Industry Trend Analysis

JACK KUSHNER MD

While there are seven major trends within the health-care industry that will affect the entire population, the two most critical are the cost-containment programs and the liability suits. If permitted free rein, these two forces could put the economic viability of the health care system in jeopardy and could squeeze out all profit margin and incentive.

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A front page *New York Times* article dated February 9, 1987, stated that the cost of medical care rose 7.7 percent in 1986, seven times faster than the consumer price index.[1] On January 26, 1987, *Newsweek's* cover story featured the revolution in medical care in the United States.[2] Why has the cost of health care escalated in the face of all the cost containment programs recently instituted? Why have hospital profits increased 12 to 15 percent for Medicare patients in 1984 and 1985?[3] What are the future trends in the health-care industry?

There are three players in the health-care delivery system: (1) the patients or consumers, (2) the providers, and (3) the third-party payors. Traditionally and historically, the system has been cemented by the patient-physician relationship. Big business (or corporate America) and the federal government are pressuring third-party payors to change the system in an effort to curtail expenses. Within these evolving cost-containment programs, patients can select which new health-care plans they want. They are, in some cases, relinquishing their choice of a physician or of a hospital.

The providers include a diversified system of hospitals, a surplus of doctors, overworked and underpaid nurses, hospital administrators, and various allied health professionals jockeying for positions of power and prestige. The third-party payors include the federal government, which is the largest single purchaser of health care through entitlement programs; numerous commercial health insurance companies; automobile insurance companies; and workmen's compensation plans.

In the past few years, the most visible and dramatic addition to the health-care industry has been the emergence of Health Maintenance Organizations (HMOs) and Preferred Provider Organizations (PPOs). These alternative delivery systems are a managed health-care concept. The differences between a HMO, a PPO, and a cost conscious insurance company are becoming fuzzy and blurred. The patient first enters the system when he or she sees an assigned salaried physician, who functions as a "gatekeeper" for the HMO. This physician may be paid a commission or given an incentive **not** to perform any diagnostic tests, **not** to arrange any referrals to a specialist, or **not** to suggest hospitalization. If, in fact, hospitalization is required, the administrator of the HMO must provide clearance, and the patient may be sent to a HMO hospital. If the patient needs to be referred to a specialist, this service will be provided at a prearranged discount. This health-care program is a form of socialized medicine provided by corporations rather than by the government, and it is a closed system in that every aspect is controlled. Approximately 11 percent of the population now belongs to some kind of HMO, and experts predict that 25 percent of the patient market will belong to HMOs by 1990.[4]

A Preferred Provider Organization (PPO) agrees to provide medical care to a group of employees or insurance companies for a volume discount. This plan can be implemented with existing resources and personnel at less expense than the creation of a HMO requires. The major risk facing the participating hospitals and doctors will be a possible loss of revenue from an established full-paying market of patients if the volume of newly discounted patients promised by the PPO arrangement does not materialize. Planners predict that 40 percent of medical care will be delivered through the PPO mechanism by 1990.[4]

Identification of Health-Care Trends

The seven major trends within the health care industry that will affect the entire population include

- rising cost of health care and cost containment programs
- liability insurance crisis
- expensive technological innovations
- proliferation of outpatient alternative delivery systems
- growth of investor owned for-profit chains
- physician glut
- AIDS epidemic

The cost of health care continues to increase despite cost containment measures. In 1965, the United States spent $40 billion on health care.[2]

According to the Department of Health and Human Services, by 1980, this figure increased to $220 billion and doubled to $420 billion by 1985. Health insurance premiums increased from $75 billion in 1980 to $145 billion in 1986. The Medicare and Medicaid portions of the federal budget rose from 3 percent in 1965 to 12 percent in 1986.

In 1964, President Lyndon B. Johnson signed the Medicare bill, which passed along costs that were deemed customary and reasonable by a retrospective billing system. In 1982, President Ronald Reagan signed the Tax Equity and Fiscal Responsibility Act (TEFRA), which set an annual limit on hospital expenses. Soon after, the Social Security bail-out plan introduced a new system for Medicare reimbursement called DRGs (Diagnostic Related Groups). DRGs provide a prospective system of payment based on various diagnostic groups.

A second trend, which continues to be unresolved, is the liability crisis. The number of suits and the size of the awards continue to increase. In 1985, one out of five doctors was named in a malpractice suit.[5] That neurosurgeons and obstetricians bear the heaviest burden is reflected in their annual premiums, which are as high as $140,000 in Florida. Despite the fact that legislators have been warned that the cost of liability insurance has approached the point where it has become impractical and dangerous for doctors to continue practicing, little corrective legislation has been passed.[6,7]

A third trend includes technological innovations, which will eventually force society and providers to make a choice about the use of their limited resources. People are beginning to understand that we are reaching the upper limits of attainment in health care for some diseases and some groups of patients. Euthanasia may soon be legalized in Holland. Governor Richard Lamm of Colorado believes we should be redirecting our resources from the older generation toward the youth of this country.[8] Some people think we should employ our resources in a more productive manner and there should be greater restraint and moderation in health care, particularly with the purchase of expensive technology.[9]

The CAT (Computerized Axial Tomographic) scanner costs between $750,000 and $1,000,000. The MRI (Magnetic Resonance Imager) represents another diagnostic improvement, but each machine costs $2 to $3 million. Other technological advances include arthroscopic surgery in orthopedics and laser surgery in gynecology, ophthalmology, vascular surgery, and neurosurgery. The Lithotriper machine destroys kidney stones without surgery; it costs $1 million. Venous infusion pumps have been developed for the self-administration of pain medications, insulin, and chemotherapy—but at a high price.

Technological innovations will increase the cost of health care in other areas. For example, heart transplant centers have continued to proliferate. The availability of artificial organs will increase, and their functioning will improve.

By the end of 1984, 2,300 urgent care centers were in operation, and 4,500 are expected by 1990. There were 249 ambulatory surgery centers in 1984, and 600 are expected by 1987.[10] These facilities may decrease the patient market for hospitals.

Presently, 25 percent of all hospitals are managed or owned by for-profit chains.[10] These hospitals have been able to generate significant amounts of capital and to reduce their expenses by volume buying. They aggressively advertise to attract patients and are rapidly expanding into alternative health-delivery systems. These investor-owned chains capitalize on the inefficiencies of traditional health-care delivery systems. They are managing "not-for-profit" hospitals, acquiring nursing home chains, and operating home-care programs. When Hospital Corporation of America merged with American Hospital Supply Corporation, their combined revenues in 1985 totaled $8 billion.[10] The top ten chains operate over 70 percent of the proprietary hospitals. Despite cost containment measures, these organizations are reporting earnings from 15 to 20 percent, with increased profit margins.

The financial forecast for these investor-owned hospitals is for growth and prosperity and for the public hospitals to gradually disappear. In time, universities may be forced to separate themselves from costly teaching hospitals. This trend could reduce the physician to a proletarian function within the larger corporations.[10] Profit considerations will resolve bioethical issues as well. The convergence of the corporate interest in cost containment and in profit reorganization will reshape the system of health care delivery and will threaten the medical profession.

The sixth trend relates to the issue of physician manpower. One of the government's answers to the cost of medical care has been the education of more physicians. From 1970 to 1983, their numbers increased from 314,407 to 482,635.[11] The number of actively practicing physicians in the US should rise by 24 percent between 1981 and 1990, and by 49 percent by the year 2000. The number of women in medical practice is expected to increase by 153 percent, so that by the year 2000, one physician in five will be a woman.[12] Women tend to aggregate in certain specialities such as pediatrics, psychiatry, preventive medicine, and physical medicine. Because of women's choice of specialty and their preference for a more structured life, this trend could lessen the impact of the future physician surplus. HMOs, PPOs, and other forms of competitive delivery systems are predicted to succeed because of this projected overabundance of physicians.

There are now 1.5 million Americans infected with the AIDS virus.[13] If forecasts are correct, we should expect an epidemic of AIDS within the next ten years, which could bankrupt insurance companies if they are

forced to cover this disease in their health policies. The life insurance companies would be even more vulnerable. Hospitals could be filled to capacity with AIDS patients, many of whom will not be able to pay their own way.

Most Critical Trends

The two most critical trends for the health-care industry are cost-containment programs and liability suits. If permitted free rein, these two forces could put the economic viability of the health care system in jeopardy and could squeeze out all profit margin and incentive.

The DRG system reflects the average cost of curing a diagnosed condition. Throughout the country this system has created an oversupply of hospital beds. The cost-containment idea has spread to the private commercial insurance companies, which now require second opinions for many surgical procedures and prehospitalization authorization. The government, industry, entrepreneurism, and consumerism are threatening the fiscal stability of the health-care industry.[4]

The liability insurance crisis is draining the entire health-care system at an annual cost of $15 to $30 billion.[10,14] Hospitals are paying as much as $10,000 a bed per year[15] for liability insurance. Many doctors are practicing "defensive medicine" by ordering more tests and recommending additional referrals in order to protect themselves from liability claims.[16] The DRG system encourages physicians to discharge patients "quicker but sicker," a practice that is predicted to increase the number of malpractice suits. The HMO cost containment policies also could increase the number of liability claims.

The attitude of the public toward physicians and the litigious nature of the population have created the liability crisis.[6,7] Ralph Nader asserts that malpractice is the cause of malpractice suits.[17] Mosberg, a Baltimore neurosurgeon, says incompetent doctors are not the only ones being sued; highly trained physicians and surgeons performing the most complicated and sophisticated types of procedures are being sued.[6,7] Schmidt declares that there is no epidemic of incompetence among doctors but rather an epidemic of unrealistic expectations of what doctors can do.[18] He says people have come to believe that doctors never should make mistakes.

Some think that tort reform will not be enough and that a different mechanism should be developed for resolving medical disputes.[6,7] The liability issue affects the entire country and economy, demanding an all-encompassing solution such as a change in the definition of negligence (that is, ordinary negligence versus gross negligence). Others think that court costs and the legal defense expenditure burden should be placed on plaintiffs who unsuccessfully file suit.

Recommended Actions

If hospitals are to survive, they must improve utilization control. The various components of hospital services will have to be measured against their respective return. Unprofitable areas will have to be identified and either eliminated or transferred to other medical facilities. Hospitals will have to reorganize their corporate structure to create holding companies or for-profit subsidiaries, which should improve their ability to diversify and participate in coventuring programs.

Some hospitals should expand in a horizontal fashion. It is predicted that by 1995, 80 percent of existing hospitals will belong to a multihospital system.[4] This arrangement could provide the hospitals with greater access to capital, better purchasing ability, and improved management and information systems. In addition, hospitals could diversify in a vertical direction. Joint ventures with physicians also would increase hospitals' resources.

Dr. J.H. Sammons, Executive Vice-President of the American Medical Association, proposes that a publicly managed trust must be established to fund a government-financed voucher system, which would allow citizens to purchase private health insurance. He would replace the health insurance payroll tax on adjusted gross income up to $100,000 and establish an IRA (Individual Retirement Account) savings plan to allow a patient to make tax-free withdrawals to cover his or her medical expenses after reaching an eligible age. Finally, he favors an extended benefits program that would include coverage for catastrophic illness.[19]

The health-care industry should support the Administration Task Force report.[14] Health deliverers need to work at influencing their congressional representatives and their state legislatures to pass laws to effect tort reform.[14,20] These reforms should:

- Limit noneconomic damages to $100,000
- Modify the collateral source rule with mandatory offset
- Permit periodic payments
- Eliminate joint and several liability
- Reject findings based on fringe scientific or medical opinions well outside the mainstream of accepted scientific or medical beliefs
- Limit the theory of product liability to traditional areas of product injuries
- Limit attorneys' fees by adopting a sliding scale
- Develop an alternative legal mechanism, such as arbitration and mediation.

Finally, health providers should support Carol McCarthy of the American Hospital Association, who is attempting to rectify some misperceptions about the cost of health care.[21] She argues that hospital price increases are in line with other service industries and cannot be compared to the Consumer Price Index (CPI). McCarthy states the CPI measures changes in prices that individuals pay for goods and services, but these prices do no reflect the actual costs of hospital care. Labor-intensive service industries resist deflationary trends. Salaries move in only one direction: up. Labor is responsible for 60 percent of a hospital's business expenses. She advocates use of a health-care price index to measure health-care sector performance. Measured by this health index, constant dollar increases in personal health care averaged just 2.5 percent in 1984 and 1985. Growth in payments to hospitals dropped dramatically from 4.1 percent from 1976 to 1981, to 0.2 percent in 1984–1985. In view of this reasoning, the eye-catching article in the *New York Times*, February 9, 1987, was misleading.[1]

In considering various trends affecting the health care industry, Dr. Blitzer, Professor at Columbia College of Physicians and Surgeons, observed that the principle of life above all costs has been rewritten as life at a reasonable cost. He believes that unless we establish a careful balance between technological advancement and its costs, the same commercialism that led to the shuttle disaster and resultant deaths may well do the same for the health care industry.[22]

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Change and Choice: New Dimensions of Private Practice

RAYMOND R. ROBINSON MPA and ALBERT M. ANTLITZ MD

Doom sayers have predicted the imminent demise of the private practice of medicine. Indeed, economic, political, and demographic facts indicate that significant change is already taking place. However, the authors suggest that physicians choosing to begin or to continue in private practice can survive and prosper by adopting sound business techniques and a humanistic approach to patient relations.

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The private practice of medicine in late twentieth-century America is being transformed by the influence of powerful forces. In addition to changes brought about by technology and specialization, the economic underpinnings of medical practice are collapsing from the weight of government pressure to control physician fees, the colossal burden of malpractice premiums, increased competition from alternative delivery systems, and a perceived surplus of physicians. For their profession to arrive intact into the twenty-first century, doctors today are warned they must become more efficient business managers and more humanistic care givers.

Evidence abounds that things are changing. A number of surveys and studies have suggested that privately practicing physicians are losing income, leaving practice, taking salaried jobs, and joining alternative delivery systems. Overall reductions in physicians' income appears to be a direct result of competition from HMOs.[1] The specter of malpractice litigation along with increasingly restrictive government regulations have provoked an increase in early retirement and defection from certain medical specialties. Physician demographics suggest that more than 25 percent of American doctors are salaried employees.[2] Women physicians, who clearly indicate preferences for a professional life that allows ample time for family and leisure considerations, are an increasingly significant portion of the profession.[3] Further evidence of change can be observed in declining medical school applications and the option of many young physicians for the world of corporate health care.

Competition for patients is perhaps the most striking change affecting privately practicing physicians. HMOs and other alternative forms of medical care delivery are capturing a significant percentage of the medical marketplace.[1] Doctors are feeling the impact of the rigorous marketing and consolidated services being developed by many hospitals. Mirroring the for-profit "supermed" systems, community hospitals of all sizes are uniting to fortify their positions by offering "one-stop shopping," with services ranging from walk-in clinics to highly technical and intensive tertiary care. Ironically, even some office-based physicians are forming relationships with these health systems by offering volume discounts in return for a piece of the action.

Internecine rivalry, still new to the medical community, is exacerbated by government and business's demand for containment of the cost of physician services. In 1986, for example, the growth rate in physician fees was 7.5 percent as compared with a consumer price index of only 2 percent.[4] The federal government, one of medicine's major payors, has flexed its considerable muscles by mandating a limit to the amount of dollars that flow from government coffers into doctors' pockets. The Reagan Administration has espoused capitation as a means to further limit physician payments and has designs to constrain fees to hospital-based radiologists, anesthesiologists, and pathologists by locking them into diagnosis-related payments. State governments, too, are examining take-it or leave-it strategies that would require doctors to accept predetermined rates as full payment for care of Medicare and Medicaid recipients.

Some critics have argued that, as a result of these potent forces, the private practice of medicine is doomed. Many stalwarts, however, believe that while the vast majority of twenty-first century physicians will have traded their autonomy for the assurances of government and business sponsorship, the privately practicing physician can and will compete successfully by strategically adapting to the circumstances. There is considerable agreement that the virtues of quality and efficiency will characterize the successful private practitioner of the next century, but to reach this point, much painful reeducation will be required.

Physicians of the future who choose private practice will need to be astute business managers. They will be entrepreneurs who understand the economic advantages of affiliations with alternative delivery systems in terms of a broader patient base and enhanced revenue potential. With the aid of patient-mix analysis and other sophisticated techniques, these physicians will skillfully balance capitation and fee-for-service incomes to avoid the dependency syndrome often experienced by their twentieth-century colleagues. Further, they will use computer-assisted capitation tracking methods to monitor those areas of medical treatment for which they are at financial risk. In short, these physicians will have learned to live in a cooperative and mutually beneficial relationship with the requirements of managed health care.

Tomorrow's private practitioners will be increasingly accessible and available to patients. They will offer

their services to all strata of society regardless of source of payment. Patients of these office-based physicians will be treated considerably better than is the norm today. In fact, the entire demeanor of physicians' office protocol will become more patient centered. Twenty-first century physicians, skilled in the art of interpersonal relations, will provide their patients with an increased sense of caring and concern. Doctors' office staff will look patients in the eye, remember their names, and make them feel unique and important. Office waiting time will be reduced dramatically, and there will be a noticeable increase in the number of attempts to obtain patient feedback about treatment, personnel, and amenities. Patient satisfaction and the management of medical malpractice liability will be of paramount importance; "guest relations" (patient relations) will distinguish the successful private practitioners of the future.

Medical excellence exhibited through a record of positive patient outcomes will characterize tomorrow's successful private practice. Medical outcome records will be public information and private practitioners will be judged on the appropriateness, necessity, and effectiveness of their treatment. In addition, successful office-based physicians will have certain distinctive practice characteristics: (1) they will avoid the appearance of an "outlier" in all aspects of their practice including fee setting and utilization of services; (2) they will have affiliated with one or more of their colleagues in a group practice for the purpose of economies of scale, pooled resources, and increased bargaining power; (3) as an adjunct to their office practice, they may own or operate an urgent care or ambulatory surgery facility and most likely will have a small office pharmacy; and (4) they will use midlevel practitioners extensively to increase their efficiency and effectiveness.

The privately practicing physician who adapts to meet the demands of the new age in medicine will have a decided advantage. Over time, competition among providers of "corporate medicine" will confuse the marketplace with an array of multioption programs. Health-care consumers will be frustrated by an inability to distinguish quality medical care from marketing "hype." As a result, patients will return to the privately practicing physician as the best assuror of quality medical care.

Physicians choosing to begin or to continue in private practice during these challenging times will need to weather the maelstrom of dramatic change in their preferred mode of practice. Despite the doom sayers, office-based physicians can secure their futures by adopting successful business strategies and a humanistic approach to patient relations. Moreover, as these private practitioners prosper financially, the emphasis on interpersonal relations will result in a greatly enhanced quality of care. Predictions of the death of private practice in America, in Mark Twain's words, have been greatly exaggerated.

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Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K^+ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K^+ intake. **Associated widened QRS complex or arrhythmia requires prompt additional therapy.** Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available. Sensitivity reactions may occur in patients with or without a history of allergy or bronchial asthma. Possible exacerbation or activation of systemic lupus erythematosus has been reported with thiazide diuretics.

Precautions: The bioavailability of the hydrochlorothiazide component of 'Dyazide' is about 50% of the bioavailability of the single entity. Theoretically, a patient transferred from the single entities of triamterene and hydrochlorothiazide may show an increase in blood pressure or fluid retention. Similarly, it is also possible that the lesser hydrochlorothiazide bioavailability could lead to increased serum potassium levels. However, extensive clinical experience with 'Dyazide' suggests that these conditions have not been commonly observed in clinical practice. Angiotensin-converting enzyme (ACE) inhibitors can elevate serum potassium; use with caution with 'Dyazide'. Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids, and during concurrent use with amphotericin B or corticosteroids or corticotropin [ACTH]). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Cumulative effects of the drug may develop in patients with impaired renal function. Thiazides should be used with caution in patients with impaired hepatic function. They can precipitate coma in patients with severe liver disease. Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic and hemolytic anemia have been reported with thiazides. Thiazides may cause manifestation of latent diabetes mellitus. The effects of oral anticoagulants may be decreased when used concurrently with hydrochlorothiazide; dosage adjustments may be necessary. Clinically insignificant reductions in arterial responsiveness to norepinephrine have been reported. Thiazides have also been shown to increase the paralyzing effect of nondepolarizing muscle relaxants such as tubocurarine. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. Triamterene has been found in renal stones in association with the other usual calculus components. Therefore, 'Dyazide' should be used with caution in patients with histories of stone formation. A few occurrences of acute renal failure have been reported in patients on 'Dyazide' when treated with indomethacin. Therefore, caution is advised in administering nonsteroidal anti-inflammatory agents with 'Dyazide'. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine. Hypokalemia is uncommon with 'Dyazide', but should it develop, corrective measures should be taken such as potassium supplementation or increased dietary intake of potassium-rich foods. Corrective measures should be instituted cautiously and serum potassium levels determined. Discontinue corrective measures and 'Dyazide' should laboratory values reveal elevated serum potassium. Chloride deficit may occur as well as dilutional hyponatremia. Concurrent use with chlorpropamide may increase the risk of severe hyponatremia. Serum PBI levels may decrease without signs of thyroid disturbance. Calcium excretion is decreased by thiazides. 'Dyazide' should be withdrawn before conducting tests for parathyroid function. Thiazides may add to or potentiate the action of other antihypertensive drugs. Diuretics reduce renal clearance of lithium and increase the risk of lithium toxicity.

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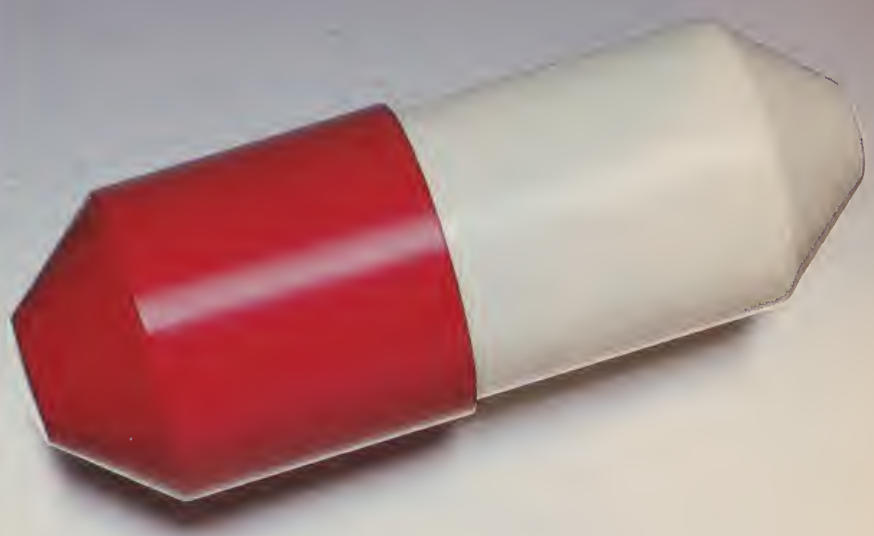
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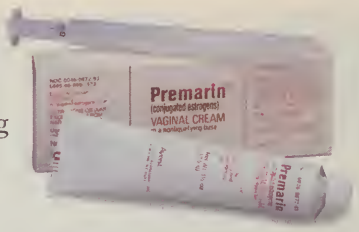
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CONTRAINDICATIONS: Estrogens should not be used in women (or men) with any of the following conditions: 1. Known or suspected cancer of the breast except in appropriately selected patients being treated for metastatic disease. 2. Known or suspected estrogen-dependent neoplasia 3. Known or suspected pregnancy (see Boxed Warning). 4. Undiagnosed abnormal genital bleeding 5. Active thrombophlebitis or thromboembolic disorders. 6. A past history of thrombophlebitis, thrombosis, or thromboembolic disorders associated with previous estrogen use (except when used in treatment of breast or prostatic malignancy).

WARNINGS: Estrogens have been reported to increase the risk of endometrial carcinoma (see Boxed Warning). However, a recent large, case-controlled study indicated no increase in risk of breast cancer in postmenopausal women. A recent study has reported a 2- to 3-fold increase in the risk of surgically confirmed gallbladder disease in women receiving postmenopausal estrogens.

Adverse effects of oral contraceptives may be expected at the larger doses of estrogen used to treat prostatic or breast cancer or postpartum breast engorgement; it has been shown that there is an increased risk of thrombosis in men receiving estrogens for prostatic cancer and women for postpartum breast engorgement. Users of oral contraceptives have an increased risk of diseases, such as thrombophlebitis, pulmonary embolism, stroke, and myocardial infarction. Cases of retinal thrombosis, mesenteric thrombosis, and optic neuritis have been reported in oral contraceptive users. An increased risk of postsurgery thromboembolic complications has also been reported in users of oral contraceptives. If feasible, estrogen should be discontinued at least 4 weeks before surgery of the type associated with an increased risk of thromboembolism, or during periods of prolonged immobilization. Estrogens should not be used in persons with active thrombophlebitis, thromboembolic disorders, or in persons with a history of such disorders in association with estrogen use. They should be used with caution in patients with cerebral vascular or coronary artery disease. Large doses (5 mg conjugated estrogens per day), comparable to those used to treat cancer of the prostate and breast, have been shown to increase the risk of nonfatal myocardial infarction, pulmonary embolism, and thrombophlebitis. When doses of this size are used, any of the thromboembolic and thrombotic adverse effects should be considered a clear risk.

Benign hepatic adenomas should be considered in estrogen users having abdominal pain and tenderness, abdominal mass, or hypovolemic shock. Hepatocellular carcinoma has been reported in women taking estrogen-containing oral contraceptives. Increased blood pressure may occur with use of estrogens in the menopause and blood pressure should be monitored with estrogen use. A worsening of glucose tolerance has been observed in patients on estrogen-containing oral contraceptives. For this reason, diabetic patients should be carefully observed. Estrogens may lead to severe hypercalcemia in patients with breast cancer and bone metastases.

PRECAUTIONS: Physical examination and a complete medical and family history should be taken prior to the initiation of any estrogen therapy with special reference to blood pressure, breasts, abdomen, and pelvic organs, and should include a Papanicolaou smear. As a general rule, estrogen should not be prescribed for longer than one year without another physical examination being performed. Conditions influenced by fluid retention, such as asthma, epilepsy, migraine, and cardiac or renal dysfunction, require careful observation. Certain patients may develop manifestations of excessive estrogenic stimulation, such as abnormal or excessive uterine bleeding, mastodynia, etc. Prolonged administration of unopposed estrogen therapy has been reported to increase the risk of endometrial hyperplasia in some patients. Oral contraceptives appear to be associated with an increased incidence of mental depression. Patients with a history of depression should be carefully observed. Pre-existing uterine leiomyomata may increase in size during estrogen use. The pathologist should be advised of estrogen therapy when relevant specimens are submitted. If jaundice develops in any patient receiving estrogen, the medication should be discontinued while the cause is investigated. Estrogens should be used with care in patients with impaired liver function, renal insufficiency, metabolic bone diseases associated with hypercalcemia, or in young patients in whom bone growth is not yet complete. If concomitant progestin therapy is used, potential risks may include adverse effects on carbohydrate and lipid metabolism.

The following changes may be expected with larger doses of estrogen:

a. Increased sulfobromophthalein retention.

b. Increased prothrombin and factors VII, VIII, IX, and X; decreased antithrombin 3, increased norepinephrine-induced platelet aggregability.

c. Increased thyroid binding globulin (TBG) leading to increased circulating total thyroid hormone, as measured by PBI, T_4 by column, or T_4 by radioimmunoassay. Free T_3 resin uptake is decreased, reflecting the elevated TBG; free T_4 concentration is unaltered.

d. Impaired glucose tolerance

e. Decreased pregnanediol excretion.

f. Reduced response to metyrapone test.

g. Reduced serum folate concentration.

h. Increased serum triglyceride and phospholipid concentration.

As a general principle, the administration of any drug to nursing mothers should be done only when clearly necessary since many drugs are excreted in human milk.

Long-term, continuous administration of natural and synthetic estrogens in certain animal species increases the frequency of carcinomas of the breast, cervix, vagina, and liver. However, in a recent, large case-controlled study of postmenopausal women there was no increase in risk of breast cancer with use of conjugated estrogens.

ADVERSE REACTIONS: The following have been reported with estrogenic therapy, including oral contraceptives: breakthrough bleeding, spotting, change in menstrual flow, dysmenorrhea, premenstrual-like syndrome; amenorrhea during and after treatment, increase in size of uterine fibromyomata, vaginal candidiasis, change in cervical erosion and in degree of cervical secretion, cystitis-like syndrome; tenderness, enlargement, secretion (of breasts); nausea, vomiting, abdominal cramps, bloating; cholestatic jaundice; chloasma or melasma which may persist when drug is discontinued, erythema multiforme; erythema nodosum; hemorrhagic eruption, loss of scalp hair; hirsutism; steepening of corneal curvature; intolerance to contact lenses; headache, migraine, dizziness, mental depression, chorea; increase or decrease in weight, reduced carbohydrate tolerance, aggravation of porphyria; edema, changes in libido.

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Patients with an intact uterus should be monitored for signs of endometrial cancer and appropriate measures taken to rule out malignancy in the event of persistent or recurring abnormal vaginal bleeding.

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Given cyclically for short-term use only For treatment of atrophic vaginitis or kraurosis vulvae.

The lowest dose that will control symptoms should be chosen and medication should be discontinued as promptly as possible.

Administration should be cyclic (eg, three weeks on and one week off).

Attempts to discontinue or taper medication should be made at three- to six-month intervals.

Usual dosage range: 2 g to 4 g daily, intravaginally, depending on the severity of the condition.

Treated patients with an intact uterus should be monitored closely for signs of endometrial cancer and appropriate diagnostic measures should be taken to rule out malignancy in the event of persistent or recurring abnormal vaginal bleeding.

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With rare exception, the *Maryland Medical Journal* has long held to a policy of not reprinting articles that have been published elsewhere. The following commentary by Roland T. Smoot MD fits the exception. Dr. Smoot suggests a novel approach to a problem of critical import to all practicing physicians. It merits wide dissemination and critical discussion. The article originally appeared as a guest editorial in the July 1987 issue of the *Journal of the National Medical Association* and is reprinted here with permission. *JIM ZIMMERLY* MD

A Giant Step to Save American Medicine

ROLAND T. SMOOT MD

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The medical profession in this country is responsible, at least in part, for its plight regarding the recent promulgation of a plethora of highly questionable and suspect rules, regulations, and requirements that govern today's medical care costs. In fact, medical professionals have not shown the degree of fiscal responsibility or concern that would permit the general public, their party payers, and the official sector to entrust them with even a minor role in planning and operating our highly complex, competitive health care industry. For these and other reasons, it has become essential that the medical profession demonstrate commitment, and not merely involvement, in effecting fiscal efficiency in the health care industry. If this happens, the medical profession's credibility will dramatically improve.

First, we must approach peer review with a fresh perspective. Physicians now agree that peer review is needed. The problem has been that we have wanted someone else to underwrite or pay for the costs of peer review—not a fortunate circumstance. As a consequence, our government and third party payers are underwriting the cost of peer review and, with the associated power, dictating the manner by which it is achieved. Practically speaking, this is very much in keeping with the Golden Rule of the free enterprise system: "He who has the gold makes the rule." Peer review in medicine, not unlike continuing medical education is the exclusive, incontrovertible responsibility of the medical profession, and should be funded by the medical profession.

Virtually all health care regulators enacted in the past ten years have centered exclusively on the hospital care sector in order to constrain the great increase in health care costs that were abounding there.

I propose that the medical profession's approach to resolving this problem (i.e., the lack of adequate input in the formulation of regulations controlling the health care delivery system) be accomplished with two primary objectives in mind. The first is to eliminate inappropriate hospital admissions, and the second, to attain the proper length of stay for the hospitalized patient.

Plan for Peer Review

Each hospital medical staff should establish a fund derived from an assessment made of its membership. This fund would be used to pay for unnecessary hospital charges resulting from inappropriate admission and imprudent case management resulting in unnecessary length of stay.

A fund established from monies from a professional group for the purpose of paying for certain inappropriate actions of its members would be unique to the medical profession. Such a fund currently exists in the legal profession in some states.

At first glance it would appear that charges derived from the inappropriate admission and unnecessary length of stay of patients would require a very large sum of money for the proposed inappropriate hospital charge fund (IHCF). Not necessarily, if the admission review process and the review activity regarding length of stay occur *concurrently* and *not retrospectively*. A decision or determination regarding the appropriateness of an admission can be easily rendered within 48 hours after admission. When the hospitalization is deemed inappropriate, the patient should be discharged promptly.

Under the same scheme, the medical staff should waive any and all professional charges incurred during an inappropriate admission and any period of unnecessary hospital stay due to the attending physician's management.

Significant financial benefits would be derived by the hospital through the implementation of such a plan. The administration of the hospital should be responsible for all administrative and secretarial costs needed to perform this peer-review activity. In addition, the administration may desire to make a financial contribution to the IHCF.

Those members of the hospital medical staff who are found to be responsible for inappropriate charges would have sanctions placed upon them by the entire medical staff. The exact nature of the sanctions to be imposed shall be determined by the hospital medical staff, and these would be: (1) prehospitalization certification approved by another hospital staff member in good standing; (2) an increase in the assessment to the IHCF required of the derelict physician; (3) mandatory fulfillment of additional continuing medical education requirements that pertain to hospitalization and case management; and (4) suspension of admitting privileges.

This plan affords so-called organized medicine, including the American Medical Association, the National Medical Association, and the speciality societies, the opportunity to play the following significant roles:

1. To collectively provide the resources and expertise to develop and refine criteria for admission to the hospital and guidelines regarding length of hospital stay.

2. To establish the methods and criteria governing the collection of relevant, timely, and comparable data from all over the country.

3. To give assistance to the medical staff and the hospital when controversy arises between the staff and payers regarding appropriateness of a hospital admission or the length of stay. This assistance should include interaction with the payer in arranging an arbitration plan or with the hospital and medical staff in obtaining legal services when arbitration fails. The Hospital Association should enjoin organized medicine in this endeavor.

4. To provide hospitals with an outside resource for case review activity when its own medical staff is unable to perform this activity or in instances when the medical staff requests such a service.

A consortium of several of the leading medical centers in this country might be a much more readily accessible resource for achieving objectives 1 and 2.

Advantages for the Health Care Industry

Advantages of such a plan for the health care industry include hospital peer-review activity, which would be financed by the medical staff. In the case of the federal government, this will practically eliminate the need for expenditure for the Professional Review Organization (PRO), and this is in keeping with the policy of reducing federal expenditures advocated by both the legislative and executive branches of the federal government.

A more efficient health care delivery system would develop because the financial benefactors have placed themselves at risk. This will deter overregulation.

With this plan operational, data can be collected readily that will assess the validity and cost effectiveness of the diagnostic-related groups (DRG) method of payment, as contrasted with the conventional method of payment in the setting of an efficiently run health care delivery system.

Advantages for the Hospital and the Medical Profession

A greatly improved relationship would develop between the hospital administration and the medical staff. This relationship has deteriorated over the past several years due to circumstances that have tended to create adversarial confrontation.

Hospital debt associated with the loss of revenue from inappropriate admissions and unnecessary lengths of hospital stay would be eliminated.

Hospital peer-review activity would be done concurrently and exclusively by physicians, unlike the present physician supervised operation (PRO), which is usually done retrospectively.

The concurrent review and oversight activity by the physician representative of the medical staff would greatly reduce the bonafide malpractice cases that occur in the hospital setting. This review would also provide another source of information for the hospital's risk-prevention program, thereby improving the programs' effectiveness.

The demonstration of a commitment to the development of an efficiently run health care delivery system, a commitment not yet made clear, would enhance the credibility of our profession and give it a more effective and influential voice. Given that, the issue of the quality of health care can be addressed adequately.

The hospital case review process would play an important role in continuing medical education for both the attending and reviewing physicians. It would stimulate the review and study of the clinical entities encountered. Medical education derived in this manner would be of the greatest practical value for the practitioner and the health care delivery system, an ideal way to advance the state of the art.

Preadmission review by insurance carriers would no longer be necessary, thereby simplifying the hospital admission process. Imposed preadmission review is perceived as a punitive action that has been arbitrarily thrust upon the whole profession because of the action of a relatively small percentage of its entire membership. It is also professionally insulting, as the decision regarding medical necessity for hospitalization is typically rendered by a non-physician.

Advantages for the Patient

Each hospitalized person would have the service of a physician representing the hospital medical staff who oversees the diagnostic and treatment plan of his or her attending physician, free of charge.

The savings realized by the insurance carriers should result in a decrease in the rate of rise of health insurance premiums, and may even result in a premium reduction.

Advantages for the Payers

The payers would no longer have to appropriate funds for the administration of preadmission review and hospital peer-review activities.

A second medical or surgical opinion is rendered automatically in the case of the hospitalized patient, and this at no cost to the payer.

This plan removes the third party payer from the

possibility of having to deny medical coverage prior to admission, thereby effectively preventing the admission. Such an action adversely affects the carrier-subscriber relationship, especially when denial is followed by an untoward event.

Most important, third party payers have nothing to lose in this plan, as the payers will usually make the final decision regarding approval of the alleged services and the resulting payment.

It is unlikely that this plan will be voluntarily tried by physicians, although they will offer no substantial reasons to the contrary. The usual posture of the medical profession has been one of resisting proposed changes in the practice of medicine.

Enactment of this plan on a trial basis can be achieved if the third party payers insist upon it and, in addition, provide inducements and incentives to hospitals and their medical staffs. The Golden Rule will apply here, too.

Indeed, a plan of this type is in the best interest of all—the payers, the patients, and our profession.

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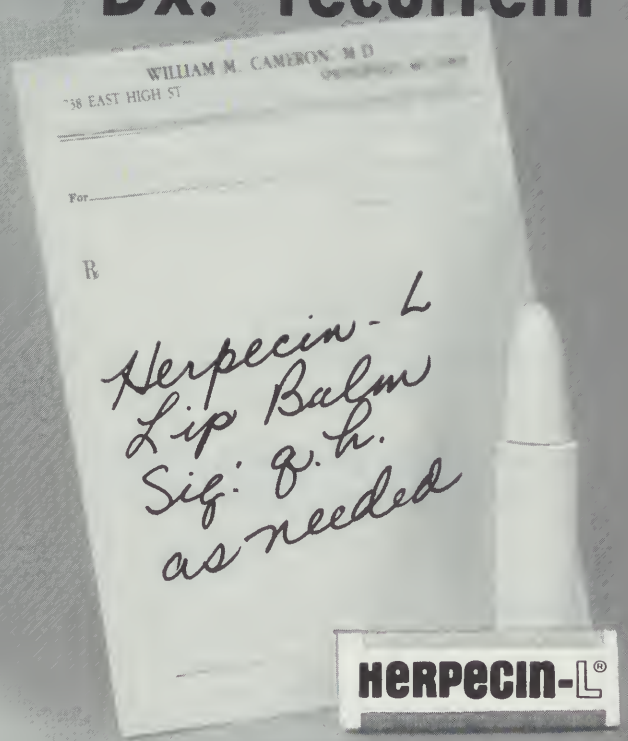
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POINT: Guidelines for Emergency CT Head Scans

HUBERT S. MICKEL MD

Dr. Mickel is a Diplomate of the American Board of Emergency Medicine, a Diplomate in Neurology of the American Board of Psychiatry and Neurology, an Examiner for the American Board of Emergency Medicine, an emergency physician at Suburban Hospital in Bethesda, in addition to his work as a special expert in neuropathology at the National Institutes of Health.

Dr. R. J. Rothstein's Commentary[1] on Sexton and Caples' article[2] on emergency CT scan of the head raised important questions about using information obtained by a retrospective study to establish criteria of indications for ordering CT scans of the head on an emergency basis. In the Sexton and Caples article, a positive result on the CT scan was correlated with a positive indication. Only the "negative" scans on stroke patients were accepted as being of value since 70 percent of such patients were begun on heparin anticoagulation.

It is important to emphasize that a "negative" CT scan is the result sought in many emergency situations. Head injury patients who have had an unknown period of unconsciousness may be discharged from the emergency department if they have no other problems, if their mental and neurological status has returned to normal, and if they have a normal CT head scan. Similarly, to find no hemorrhage following a new focal neurological deficit allows the physician to anticoagulate: a treatment contraindicated with hemorrhage.

It is important to emphasize the possible urgent need for CT scans of the head for "low-yield indications." In agreement with Dr. Rothstein's Commentary, a CT scan of the head should be obtained to exclude subarachnoid hemorrhage following a severe, recent onset headache that is not customary for the patient and for which no other etiology (such as temporal arteritis) is clinically obvious. It is the responsibility of the emergency physician to recognize and/or exclude the critical conditions in each and every patient seen in the emergency setting.[3,4] Even if subarachnoid hemorrhage were found in only an occasional case, obtaining the test would be appropriate to make an early diagnosis of a potentially fatal or disabling condition.

A consensus of neurological opinion is that a patient with a potential subarachnoid hemorrhage should not be discharged from the emergency department without obtaining a CT scan of the head. If the suspicion is very high, a lumbar puncture is also necessary. To make emergency physicians practice by another standard (based on the contingency of the time of day and convenience of hospital personnel) is to place the emergency physicians and their patients in unnecessary jeopardy.

Simply stated, subarachnoid hemorrhage should be considered by emergency physicians for every patient presenting with severe headache, and if after careful history and examination the diagnosis cannot be excluded, a CT head scan is indicated. In a large series of patients presenting with severe headache, instead of subarachnoid hemorrhage, one will find acute hydrocephalus, subdural hematomas, tumors, or other pathology.

In many community hospitals, the emergency physician interprets all the emergency X-rays after the radiologist leaves at night. The absence of a radiologist is not an appropriate reason to defer obtaining a CT scan. The noncontrast CT scan of the head is needed as an emergency procedure since it will show hemorrhage, mass effect, or evidence of pressure. A contrast CT head scan is an elective procedure.

Interpreting a CT scan of the head is not beyond the capabilities of the emergency physician to learn to do. Findings on the CT scan that would suggest a critical problem would be a mass effect with evidence of increased intracranial pressure, acute hydrocephalus, or the presence of hemorrhage.

To miss finding a brain tumor without hemorrhage and without any mass effect in the middle of the night creates no critical problem as long as it is recognized the next day. However, there are some problems that cannot wait until the next day for recognition and treatment. These the emergency physician must sort out from the many that present to the emergency department with a "low-yield indication" for emergency CT scan of the head.

I suggest these guidelines for obtaining emergency CT head scans from the emergency department.

I. Following head trauma
The presence of any of the following:
- A. Any neurological deficit
  1. Hemiparesis
  2. Sensory deficit
  3. Incoordination not due to intoxication
  4. Cranial nerve abnormalities developing after trauma
  5. Alterations in mental state
- B. History of unconsciousness or a period of altered consciousness
- C. Persisting severe headache or headache of increasing severity
- D. Documentation of the presence of a hemophilia or other bleeding diathesis or history of treatment with anticoagulants
- E. Patients with problems that predispose to injury following head trauma:
  1. Previous craniotomy
  2. Hydrocephalus
  3. Bony abnormalities of the skull such as fibrous dysplasia, Paget's disease, or other abnormalities of the skull that might result in increased potential for injury
- F. Any patient in whom observation following head injury might not be adequate or for whom hospitalization is not otherwise indicated:

1. Elderly person living with an elderly spouse or living alone
2. A patient from a nursing home in which patient observation might be questionable

G. Patients with a high risk of subsequent head injury. Examples are alcoholic or seizure patients who might not be well observed following discharge from the Emergency Department. In these patients, a *subsequent* head injury might result in serious sequelae. A CT scan might be considered valuable to document the absence of problems related to the head trauma occurring prior to the initial visit to the Emergency Department.

II. Following acute onset of hemiparesis, sensory abnormalities, or change in mental state

A. All patients in whom the possibility of hemorrhage exists
B. All patients in whom the possibility of an expanding mass lesion exists
C. All patients in whom there is a possibility of a herniation syndrome
D. Any patient in whom the etiology of mental status change cannot be ascertained clinically

III. Following a first seizure

A. In any patient with lateralizing or localizing findings
B. Any first-seizure patient for whom discharge from the Emergency Department is planned, if there is any question of patient compliance or the adequacy of follow-up

IV. Following onset of a severe headache

A. Any patient who might have a subarachnoid hemorrhage
B. Any patient who has or might have meningitis and in whom there is a possibility of a brain abscess. The CT head scan should precede the lumbar puncture in a patient suspected of having meningitis only in those patients for whom it is considered to be clinically advisable because of concern of herniation resulting from a brain abscess or edema.
C. Any patient who might have an acute hydrocephalus
D. Any patient who might have a chronic or subacute subdural hematoma

In most cases with no complicating factors, a negative scan represents a safe indication for discharge from the emergency department. We should not be concerned primarily with the frequency of positive results on CT scans but rather focus on the need to exclude critical conditions. With these guidelines and a preoccupation with patient outcome, it is my conviction that we would protect our patients from many potentially fatal or disabling sequelae and, in so doing, practice the quality of medicine expected of us today.

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Editorial

COUNTERPOINT: To Scan or Not to Scan

JAMES G. ZIMMERLY MD, JD, MPH

The article, "Emergency CT of the Head: Indications and Utilization," by Sexton and Caples, that appeared in the June 1987 issue of the *Maryland Medical Journal* with an accompany Commentary by Robert J. Rothstein MD, has generated several comments. In the preceding article, Hubert S. Mickel MD, an experienced and respected physician who is neurologist as well as an emergency physician, comments on Sexton's article and Rothstein's commentary. Dr. Mickel advocates performing CT scans of the head much more frequently than is presently the practice. He suggests that "in a large series of patients presenting with severe headache, instead of subarachnoid hemorrhage, one will find acute hydrocephalus, subdural hematomas, tumors, or other pathology." How often will we find other pathology? In one out of every 100 CT scans or one out of every 1,000? At what level does the yield justify the additional negative scans?

Dr. Mickel advocates a CT head scan in any patient who presents to an emergency department following head trauma with a history of unconsciousness or a period of altered consciousness. The common scenario in most emergency departments is that the patient when asked whether he/she lost consciousness answers "I don't know." Or "I think so." Or "I am not sure." Even when the patient is accompanied by someone who

was present at the time of the head trauma, the statements are often equivocal. Do we order CT scans on all patients who give us equivocal comments when we are reasonably certain most of those patients did not lose consciousness according to the medical definition of the term?

Dr. Mickel advocates a CT scan of the head in "any patient in whom observation following head injury might not be adequate, or for whom hospitalization is not otherwise indicated: elderly patients and patients from nursing homes." Does this include a CT on every elderly patient who comes to an emergency departments for repair of a scalp laceration if that elderly person lives alone or with another elderly spouse or will be returning to a nursing home?

Dr. Mickel advocates a CT scan on any head trauma patients "with a high risk of subsequent head injuries." In this category he includes alcoholic patients and seizure patients who might not be well observed following their discharge from the emergency department, because these patients may develop a subsequent head injury that could result in serious sequelae. He suggests a CT scan to document the absence of problems related to the head trauma that resulted in the initial visit to the emergency department. This is strictly a medicolegal indication for the procedure. Who pays for this defensive medical practice? Does the emergency physician gain in any way? Does the physician benefit by a decrease in his liability insurance cost by ordering CT scans on all these patients?

This is defensive medicine at its finest. Where do we stop? Do we subject all our patients to the most sophisticated testing to prove they are healthy in order to have documentation that the damages they sustained most likely occurred from something that happened to them after they left our care? The normal CT scan might help us defend the claim, but unfortunately it will probably not stop the frivolous lawsuit from beginning.

The author suggests a CT scan on "any first-seizure patient for whom discharge from the emergency department is planned if there is any question of patient compliance or frequency of follow-up." I may question the compliance of many patients I discharge in the wee hours of Saturday night or Sunday morning. Do I obtain a CT scan on all of them to protect myself or do I do it because they are not capable of protecting themselves? The patient has a right to expect a reasonable diagnostic effort on my part. I have a right to expect a reasonably compliant patient. I do not always get what I expect. This suggestion is that I protect the noncompliant or unreasonable patient from themselves. There has to be a limit.

Dr. Mickel suggests a CT scan following the onset of a severe headache in any patient who *might* have a subarachnoid hemorrhage. This includes all patients with severe headache because any one of them *might* have a subarachnoid hemorrhage, even those who have a well-documented lengthy history of migraine. The author also suggests a CT scan of the head to "precede the lumbar puncture in a patient suspected of having meningitis only in those patients for whom it is considered to be clinically advisable because of concern of herniation resulting from a brain abscess or edema." How do I practice at a small community hospital that does not have the ready availability of a CT scanner? Do I delay a lumbar puncture in those cases in order to transfer the patient to a medical center for the CT scan if I suspect increased intracranial pressure? I do not think so. The practice of medicine often involves hard decisions.

Finally, the author suggests that if we follow his proposed guidelines and "we focus on patient outcome, we would be protecting our patients from many potentially fatal or disabling sequelae and in so doing practice the quality of medicine expected of us today." This is the quality expected of us by the plaintiff's attorney in every case. Plaintiff's attorneys argue that we should order every test in their patient's case to be sure to exclude the remotest possibility of an adverse outcome. The quality expected of us is the highest possible quality; this is going too far. I know of no insurance plan that offers to pay for the highest quality of medical care. The poor emergency physician on the firing line at 2 A.M. is caught between a rock and a hard place. Respected physicians are telling him to practice the best medicine possible and to order all the tests possible to exclude everything. The business manager will have the emergency physician's head scheduled for a CT scan when his profile indicates that he orders 100 CTs a month with only two positive scans on average.

I am reminded of the story of the resident of Maine who needed heart surgery. He travelled to Texas to have an internationally famous cardiovascular surgeon perform the procedure. After receiving a bill for $7,000 he informed the surgeon that he was penniless. The surgeon, outraged, exclaimed "You mean that you traveled all the way from Maine to Texas to have me operate on you and you haven't any money at all? How could you do such a thing?" The patient replied, "When it comes to my health, money is no object."

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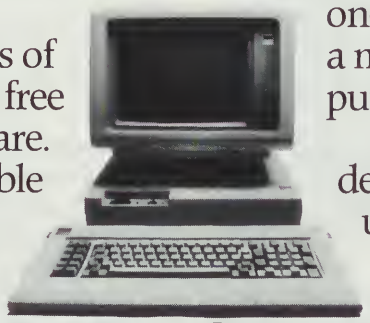
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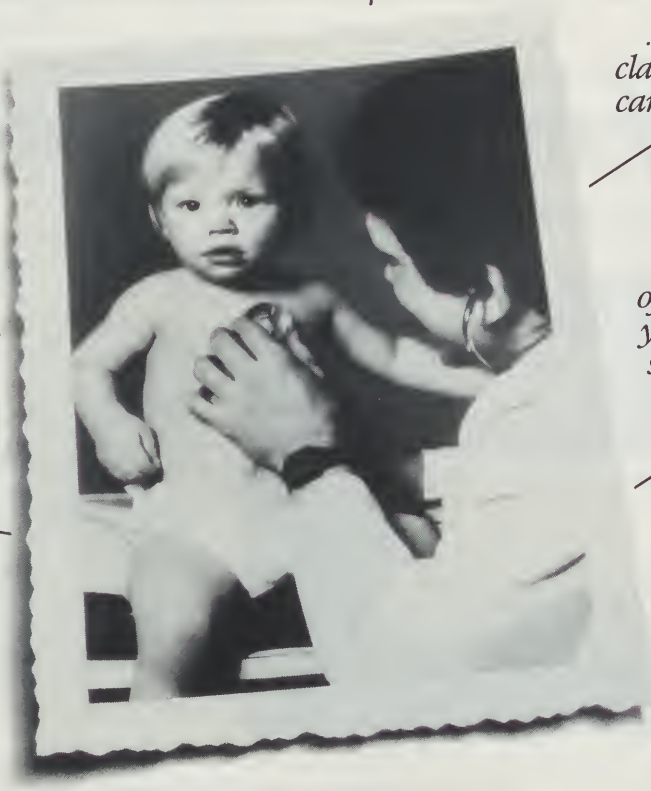
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ad·dict \ ə-'dikt \ *vb* **1 :** to devote or surrender (oneself) to something habitually or excessively **2 :** to cause (a person) to become physiologically dependent upon a drug

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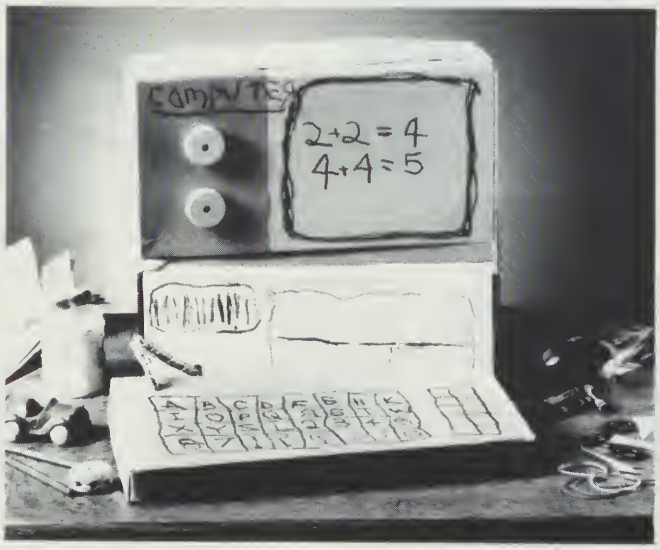
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Members in the News

Jimmy A. Chow MD, Silver Spring, recently published an article, "Anatomical Basis for Repair of Ulnar and Median Nerves in the Distal Part of the Forearm by Group Fascicular Suture and Nerve Grafting," in the *Journal of Bone and Joint Surgery*, Volume 68-A (2).

• • •

Gary A. Fleming MD, vice-president for medical affairs at Memorial Hospital and Medical Center in Cumberland, was named to the Executive Council of the Maryland Hospital Association. Dr. Fleming also will chair the group's Professional Practices Committee, one of seven standing policy committees.

Dr. Fleming is a former schoolteacher and is a graduate of Franklin and Marshall College in Pennsylvania and the University of Maryland Medical School in Baltimore. He has been active in dozens of national, state, and local health care organizations.

• • •

Morton Mower MD has been appointed head of the Cardiology Division at Sinai Hospital. Dr. Mower is a well-known and highly respected member of the hospital's medical staff and is internationally recognized in the prevention of sudden cardiac death. An excellent clinical cardiologist, Dr. Mower is the author of more than 150 definitive articles in the medical literature.

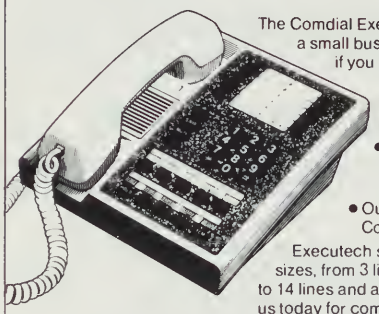
A graduate of the University of Maryland Medical School, he entered the Sinai Hospital residency in Medicine in 1969 and has since remained there as an attending physician. Dr. Mower is board certified in both medicine and cardiology.

• • •

Barry M. Wolk MD has been appointed Program Director, Department of OB/GYN at Christ Hospital and Medical Center, Oak Lawn, IL. In addition, Dr. Wolk will serve as associate professor of OB/GYN at Rush Medical College, Chicago. Dr. Wolk received his medical degree from the University of Maryland, served his internship at the University of Cincinnati Medical Center, and completed his residency at the University of Maryland Hospital. He is a Fellow of the American College of OB/GYN. For the past 11 years he has been in private practice, serving on the staff of South Baltimore General, St. Agnes, and North Arundel Hospitals.

Complete **Information for Authors**
about submitting manuscripts
to the *Maryland Medical Journal*
will appear quarterly (SEP/DEC/MAR/JUN)
in the meantime, please refer to
September 1987, page 742

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Discipline Commission Action

In the Matter of
Francesco B. Di Leo MD
Before the
Commission on Medical Discipline

Order for Emergency Suspension License

Based on information received and reviewed by the Commission on Medical Discipline (the "Commission") regarding the medical practice of Francesco B. DiLeo MD (the "Respondent"), the Commission makes the following Findings of Fact, Conclusion of Law, and Order.

Findings of Fact

Based upon all information known and available to it the Commission has reason to believe that:

1. Respondent is a physician licensed to practice medicine and practices psychiatry in Maryland.

2. On or before the summer of 1986, Respondent began promoting the use of hallucinogenic and psychedelic drugs as an adjunct to the psychotherapeutic treatment of patients, including the use as an extension of the psychoanalytic method of treatment.

3. Psychedelic drugs, including the hallucinogenic agents, are classified as Schedule I compounds by the Federal Drug Administration (FDA) and the Drug Enforcement Agency (DEA) because use of them involves high clinical risk without proved clinical benefit. There are no mental disorders for which these drugs are used in current clinical private psychiatric practice.

4. In order to use Schedule I compounds in Maryland, an authorized prescriber must be registered with the State Drug Enforcement Administration. Respondent was not registered to use Schedule I compounds in Maryland until July 1, 1987.

5. In order to administer Schedule I compounds to humans, an individual must submit a protocol to the FDA and obtain approval. Respondent submitted a protocol for the use of 3, 4 methylenedioxymethampetamine ("MDMA" or "Ectasy") with humans to the FDA and was denied approval on March 5, 1987.

6. Schedule I compounds must be obtained from authorized sponsors to assure purity and control. Respondent requested that a patient procure her own psychedelic compound for therapeutic use.

7. Schedule I compounds use is limited to laboratory controlled or institutional settings. Respondent has used these compounds in his private office practice and without recourse to hospital facilities.

8. Prior to July 1, 1987, Respondent admitted that he had been using psychedelic drugs including MDMA with patients. He has also smoked a drug call Tryptamine, a compound related to LSD.

9. Respondent has admitted to using hallucinogens during treatment sessions.

10. Respondent prepared a special substance called "ABEL" which he said was composed of Ritalin, Ketamine, and LSB. Ritaline is a central nervous system stimulant, and Ketamine is a PCP (hallucinogenic drug) while LSB is a variant of LSD, another psychedelic drug. Although Ritaline and Ketamine are commercially manufactured drugs with clinical indications, their usage together with LSB has no approved medical justification.

11. Respondent has represented to a patient and to others that the use of the above psychedelic and hallucinogenic substances were beneficial to the therapeutic process and would help them achieve "self-realization."

12. The psychedelic drugs used by Respondent are all used to induce a state of mind alteration that includes affective (mood), psychotic (thinking), and behavioral changes. All these changes may persist in any one person and may produce an emergency condition.

13. After Respondent gave a patient "ABEL," he physically left her and did not monitor her reaction.

14. Respondent engaged in sexual contact with a patient while both the patient and he were disabled and the patient was under the influence of "MDMA."

15. Respondent engaged in sexual intercourse with a patient within his private "institute" (his home) where he routinely saw patients.

16. There is no valid medical or psychiatric treatment that involves sexual contact or intercourse between psychiatrist and patient.

17. Respondent has billed a patient and a third party payor for sessions in which he had a patient take hallucinogens, representing to the patient or third-party payor that these were valid therapy sessions.

18. Respondent has billed at least one patient and a third-party payor for sessions in which he has been under the influence of hallucinogens, representing to the patient or third-party payor that he was competent to be performing psychotherapy.

19. Respondent has billed at least one patient and third-party payor for sessions in which he has had sexual contact with a patient, representing to the patient or third-party payor that these were valid therapy sessions.

20. Respondent has received payment from a patient and a third-party payor for sessions as described in paragraphs 18–20 above.

21. Section 14-504 of the Medical Practice Act, Health Occupations Article, Annotated Code of Maryland (the "Act") provides that the Commission, on an affirmative vote of a majority of its full authorized membership, may reprimand any licensee, place and licensee on probation, or suspend or revoke a license if the licensee commits any of twenty-eight (28) enumerated acts.

22. Based on the foregoing facts the Commission has reason to believe that Respondent has committed the following prohibitive acts

On instruction of the Council of the Medical and Chirurgical Faculty of the State of Maryland, "Findings of Fact, Conclusions of Law, and Order" will be published in the Maryland Medical Journal.

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Is professionally, physically or mentally incompetent. Section 14-503(4) of the Act.
Provides professional services while using any narcotic or controlled dangerous substance, as defined in Article 27 of the Code, or other drug that is in excess of therapeutic amounts or without valid medical indication. Section 14-503(10)(ii)*

23. Although Respondent is in therapy there is no indication that he has ceased from having patients take hallucinogenic substances in therapy or has ceased from using hallucinogenic substances himself.

Conclusion of Law

Based upon the foregoing facts, the Commission finds that the public health, safety, and welfare imperatively requires emergency action in this case, pursuant to State Government Article, §10-405(b), Annotated Code of Maryland.

Order

It is this **21st** day of **July 1987** by the Commission on Medical Discipline:

ORDERED that pursuant to the authority vested in the Commission by State Law Article, §10-405 of the Annotated Code of Maryland, that Francesco B. Di Leo's MD (Respondent's) license to practice medicine in the State of Maryland is hereby SUMMARILY SUSPENDED; and be it further

ORDERED that on presentation of this Order, Respondent shall immediately deliver to the Investigator of the Investigative Unit of the Department of Health and Mental Hygiene of Maryland (1) his diploma-sized Certificate from the Board of Medical Examiners, (2) his current Department of Health and Mental Hygiene License Renewal Certificate, (3) his current wallet-size license renewal card, (4) any and all permits to prescribe Schedule I or Schedule II—V drugs, (5) any documentation in any form whatsoever that indicates that he is licensed to practice medicine in Maryland, and (6) any prescription pads in his possession or custody; and be it further

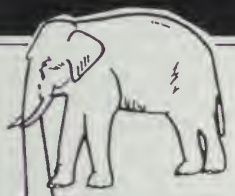
ORDERED that a hearing to consider this emergency suspension shall be held before the Commission within thirty (30) days of the date upon which the Commission receives a written request for such a hearing from the Respondent.

HILARY T. O'HERLIHY **MD, Chairman**
Commission on Medical Discipline

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* The Commission's Order for a Summary Suspension was hand delivered to Respondent with a charge letter that more fully set forth the bases of the charges contained therein.

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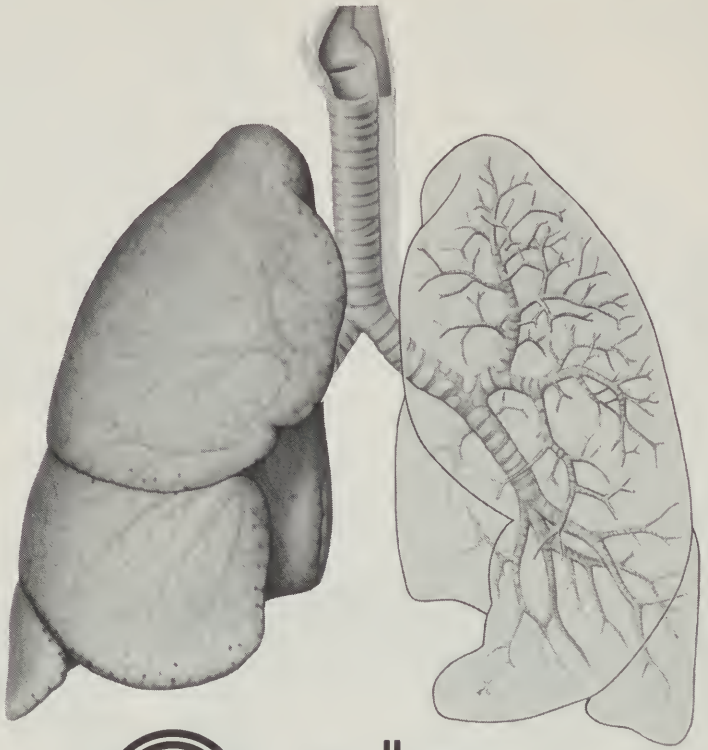
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Precautions:
- Discontinue Ceclor in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of nonsusceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients.

Adverse Reactions: (percentage of patients)

Therapy-related adverse reactions are uncommon. Those reported include:
- Gastrointestinal (mostly diarrhea): 2.5%.
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, and serum-sickness-like reactions that have included erythema multiforme [rarely, Stevens-Johnson syndrome] or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever): 1.5%; usually subside within a few days after cessation of therapy. Serum-sickness-like reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Ceclor. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.
- Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.
- As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
- Rarely, reversible hyperactivity, nervousness, insomnia, confusion, hypertonia, dizziness, and somnolence have been reported.
- Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1%; and, rarely, thrombocytopenia.

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- Transient fluctuations in leukocyte count (especially in infants and children).
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Miscellaneous Meetings

Oct 22–24 New Techniques and Concepts in Cardiology, Washington, DC. Fee: $350, ACC members; $395, nonmembers; $175, residents, fellows in training, nurses and technicians. 16 Cat I credits. Info: American College of Cardiology 800-253-4636, 301-897-5400, ext 226 (MD and AK).

Oct 26–28 NIH Consensus Development Conference: Magnetic Resonance Imaging, Masur Auditorium, Warren Grant Magnuson Clinical Center, NIH, Bethesda. Info: S. Feldman, Prospect Assoc., St. 500, 1801 Rockville Pike, Rockville, MD 20852 (301-468-6555).

Oct 30 National Conference on Women's Health Series: Osteoporosis, sponsored by the Food & Drug Administration, at the Masur Auditorium, Warren Grant Magnuson Clinical Center, NIH, Bethesda. Info: 301-443-5006.

Nov 19–21 Tenth National Trauma Symposium: Challenges of the '90s, Baltimore Convention Center. Info: P. McAllister, MIEMSS, 22 S. Greene St., Baltimore, MD 21201 (301-328-2399).

Jan 16 Mini Conference for Family Physicians—Therapeutic Update, Lord Baltimore Hotel, Baltimore, sponsored by the Maryland Academy of Family Physicians. Info: E. Barr 301-747-1980.

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The Johns Hopkins Medical Institutions

All courses at the Turner Auditorium Building unless otherwise indicated. Sponsored Continued Education Activities for 1987–88. Info: Office of Continuing Education, 720 Rutland Ave., Turner Auditorium, Baltimore, MD 21205 (301-955-5880).

Oct 23 Diabetic Retinopathy in 1987. Fee: $175, $90 (those in training); 8 AMA Cat I Credits. Info: D. Heydinger 301-955-6046.

Oct 26–27 Noise-Induced Injury and Ototoxicity: An Update, Department of Environmental Health Sciences, The Johns Hopkins University School of Hygiene and Public Health. Info: C. Walsh 301-955-2609.

Oct 26–30 Twenty-ninth Annual Emil Novak Memorial Course: Gynecology, Gynecologic Pathology, Endocrinology, and Obstetrics. Fee: $550 physicians, $400 residents; 44 AMA Cat I credits. Info: C. Kearney 301-955-3168.

Oct 31–Nov 1 Hemodynamic Monitoring/Patient Care and Pulmonary Artery Catheterization. Fee: $375; 14 AMA Cat I credits. Info: J. Ryan 301-955-6046.

Nov 4–5 Progress in *in vitro* Toxicology, sponsored by The Johns Hopkins Center For Alternatives to Animal Testing. Fee: Before Oct 2—$225, thereafter—$275; 15 AMA Cat I credits, 1.5 CEU. Info: J. Ryan 301-955-6046.

Nov 6–7 Progress in Pediatrics 1987. Fee: $100, $50 (residents & fellows); 11 AMA Cat I credits, 11 PREP credits. Info: D. Heydinger 301-955-6046.

Nov 7–8 Annual Meeting and Scientific Symposium of the Johns Hopkins School of Hygiene and Public Health, Society of Alumni: **Hard Choices in Public Health: AIDS, Aging, Biotechnology.** Info: Society of Alumni Office, JHU School of Hygiene and Public Health, 615 N. Wolfe St., Baltimore, MD 21205 (301-955-3795).

Nov 9–14 First International Congress on Oral Cancer and Jaw Tumors, co-sponsored by the World Health Organization and the International Union Against Cancer; organized by the Division of Oral and Maxillofacial Surgery, The Johns Hopkins Medical Institutions in conjunction with the Department of Oral and Maxillofacial Surgery of the National University of Singapore. Congress Coordinator: Dr. Robert W. VanBoven, The Johns Hopkins Medical Institutions 301-955-2083 or 955-6664.

Nov 13–14 Rheumatology Update: 1987. Fee: physicians $150 by 10/30/87, thereafter $175; arthritis health professionals $50 by 10/30/87, thereafter $75; students, residents, & fellows $25; 11.5 AMA Cat I credits. Info: D. Heydinger 301-955-6046.

Nov 20–22 Update in Pediatric Infectious Diseases, sponsored by The Johns Hopkins University School of Medicine, The Maryland Chapter of the American Academy of Pediatrics, and The University of Maryland School of Medicine; to be held at the Annapolis Hotel in Annapolis. Fee: member (AAP) $125, nonmember $150; 11 Cat I AMA credits, PREP credits available. Info: P. Macedonia 301-955-6085.

Dec 7–9 International Neuroradiology: Current Practices and Technique. Fee: $500 physicians, $400 technicians; 22.5 AMA Cat I credits. Info: C. Kearney 301-955-3168.

Dec 10–12 Fifteenth Annual Mason F. Lord Symposium on Geriatric Medicine and Board Review Course, in Annapolis. Fee: $250 (limited spaces for residents and fellows at reduced fee); 23 AMA Cat I credits. Info: D. Heydinger 301-955-6046.

Diagnostic Cytopathology for Pathologists, 1988 Postgraduate Institute: February to May 1988, subspecialty residency in Clinical Cytopathology, compressed into two courses, both of which must be taken:

Feb–Apr Home Study Course A—personal reading and microscopic study at own laboratory in preparation for Course B.

Apr 25–May 6 In-residence Course B—lecture series, laboratory study, and clinical experience at the Johns Hopkins Medical Institutions, Baltimore, MD, USA.

Designed solely for pathologists who are certified (or qualified for certification) by the American Board of Pathology or its international equivalent, this institute is an intensive refresher in all aspects of Clinical Cy-

topathology with time devoted to newer developments and techniques, special problems, and recent applications including *immunodiagnosis and needle aspiration.* Loan slide set with texts (Course A) will be sent each participant within the US and Canada for home study during Feb through Apr before Course B in Baltimore on April 27 to May 8. Participants *outside* the US and Canada must make arrangements to study Course A before Course B. *The entire course is given in English.*

Application and completed preregistration is advised ASAP: preregistration must be completed **before March 25, 1988**, unless by special arrangement. Info: John K. Frost MD, 604 Pathology Bldg, The Johns Hopkins Hospital, Baltimore, MD 21205, USA.

Johns Hopkins Medical Grand Rounds: audiocassettes, slides, and booklet. 30 topics and 40 AMA Cat I credits/year. Contact 301-955-3988, Office of Continuing Education, 720 Rutland Ave., Baltimore, MD 21205.

Ophthalmic Electrophysiology Technician Training Course (on-going 1-week course by appointment), The Wilmer Eye Institute, Baltimore. Info: C. M. Kearney.

The Department of Radiology and Radiological Sciences offers several courses in abdominal and obstetrical ultrasound: Courses scheduled 1/12/87–12/7/87. Info: J. Mosmiller 301-955-8450.

Basic Practicum, Nov 16–20. Fee: $460; 40 AMA Cat I credits.

Advance Practicum in Ultrasound. Dec 7–11. Fee: $460; 40 AMA Cat I credits.

Visiting Physicians is offered throughout the year, by appointment only. Fee: $460, 40 AMA Cat I credits.

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University of Maryland School of Medicine

CME Courses: For each course additional information may be obtained by contacting Program of Continuing Education, University of Maryland School of Medicine, Room 300, MSTF, 10 South Pine St., Baltimore, MD 21201 (301-328-3956).

Nov 6–7 Medical Perioperative Management, Harbor Court Hotel, Baltimore. Fee: $165; 11 AMA Cat I credits.

Nov 18 Cancer Management. Fee: $25; 5+ AMA Cat 1 credits.

Nov 18 Eighth Annual Invitational Symposium on the Elderly and Their Health: The Changing Nature of Long-Term Care—Innovations, Research, and Policy, Sheraton Inner Harbor Hotel, Baltimore. Fee: $50; 6 AMA Cat I credits.

Nov 28, 1987, Jan 16, and Feb 27, 1988 Neurology and Music at Maryland. Fee: $150; 9.75 AMA Cat I credits. Info: Dr. Kenneth Johnson, Department of Neurology, University of Maryland Hospital, 22 S. Greene St., Baltimore, MD 21201 (301-328-6484).

Dec 11 Diabetes Update. Fee: $25; 5+ AMA Cat I credits.

Jan 22 Infectious Diseases. Fee $25; 5+ AMA Cat I credits.

Visiting Professor Program—Director of speakers and topics available for area hospitals and other health care organizations. An administrative fee is charged. Info: 301-328-3956.

Visiting Practitioner Preceptorships—Opportunity for physicians to participate in clinical situations in the University of Maryland Medical Systems. Requires approval from clinical department/division heads. Direct inquiries to CME. AMA Cat I credits available.

Departmental Rounds and Conferences—September through June—Hands-on opportunities for practicing physicians including weekly lectures and discussions by sponsoring departments/divisions. Hour-for-hour AMA Cat I credits. Brochure available.

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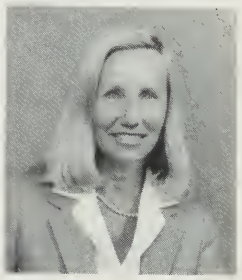
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Physicians wishing to locate in Maryland are invited to submit a resumé to be kept on file with the Physician Placement Service. Candidates are requested to inform the Faculty when they are no longer available for consideration for opportunities which might be available in Maryland.

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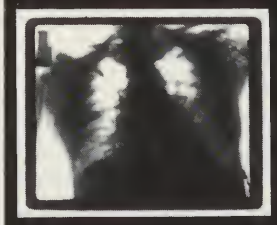
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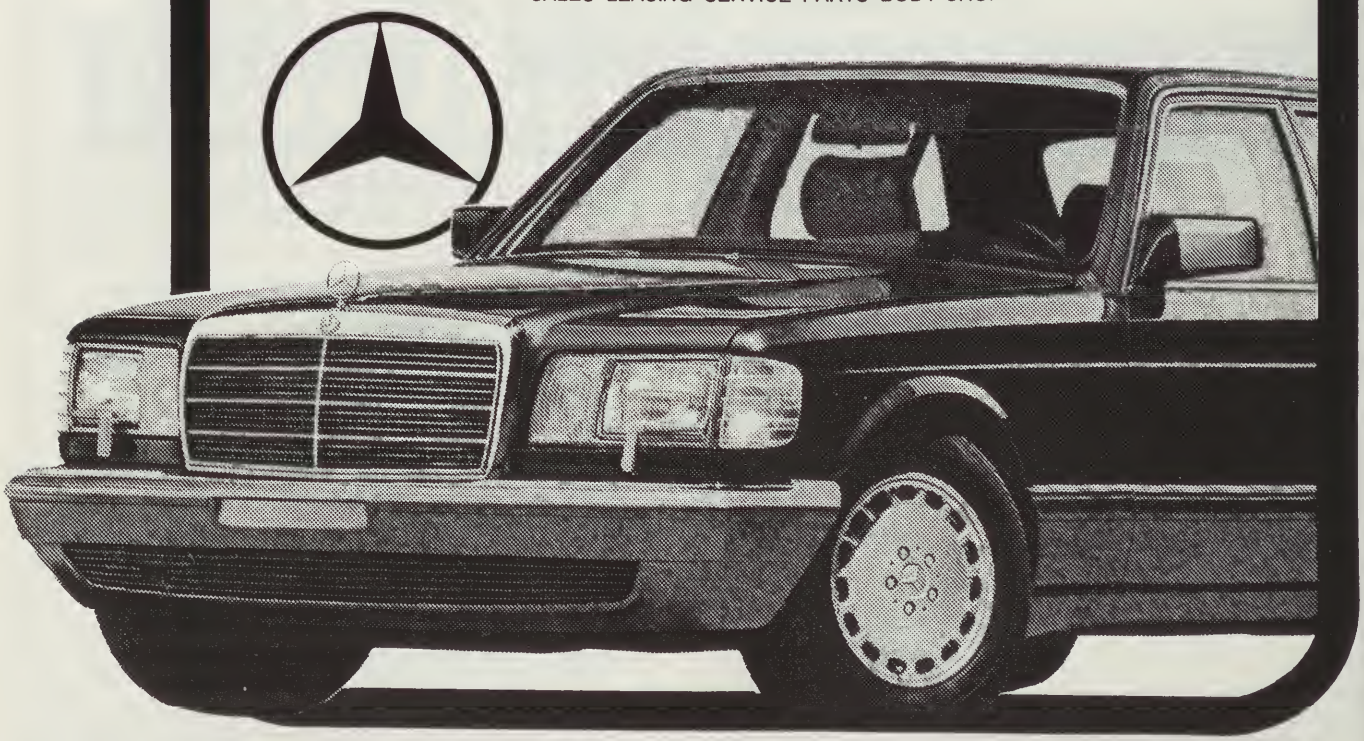
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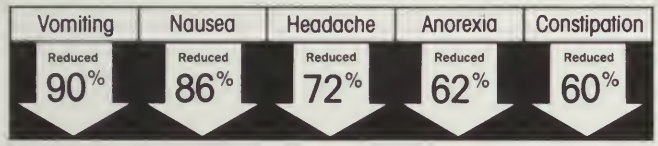
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Precautians: Use with cautian in patients with a history of seizures, in hyperthyroid patients ar thase on thyroid medication, and in patients with impaired renal ar hepatic function. Because of the possibility af suicide in depressed patients, da nat permit easy access ta large quantities in these patients. Periadic liver function tests and blood counts are recommended during prolanged treatment. Amitriptyline component may block action of guanethidine ar similar antihypertensives. When tricyclic antidepressants are used concamitantly with cimetidine (Tagamet), clinically significant effects have been reparted invalving delayed elimination and increasing steady state concentrations of the tricyclic drugs. Concamitant use af Limbitral with other psychotropic drugs has not been evaluated, sedative effects may be additive. Discantinue severol days before surgery. Limit cancamitant administration of ECT ta essential treatment. See Warnings far precautions abaut pregnancy. Limbitral should nat be taken during the nursing period. Not recammended in children under 12. In the elderly and debilitated, limit ta smallest effective dasage ta preclude ataxia, oversedation, canfusian or anticholinergic effects.
Adverse Reactians: Most frequently reported are those associated with either component alone: drowsiness, dry mouth, constipation, blurred vision, dizziness and blooting. Less frequently occurring reactians include vivid dreams, impotence, tremor, canfusion and nasal congestian. Many depressive symptams including anarexia, fatigue, weakness, restlessness and lethargy have been reported as side effects af both Limbitral and amitriptyline. Granulacytopenio, jaundice and hepatic dysfunction have been observed rarely.
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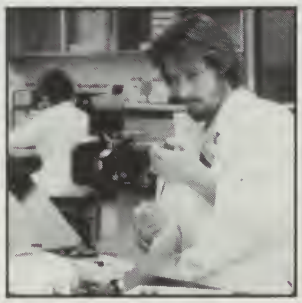
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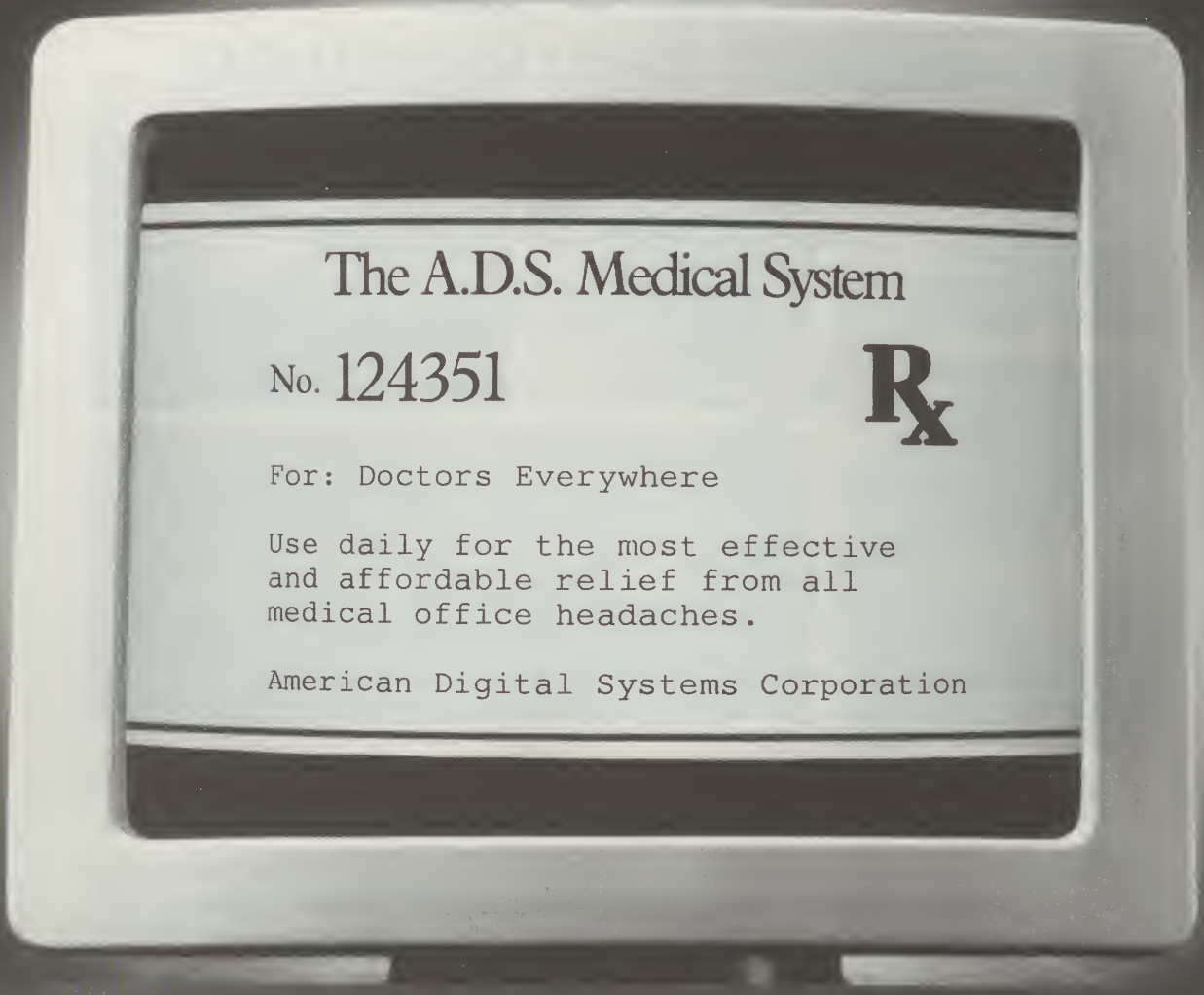
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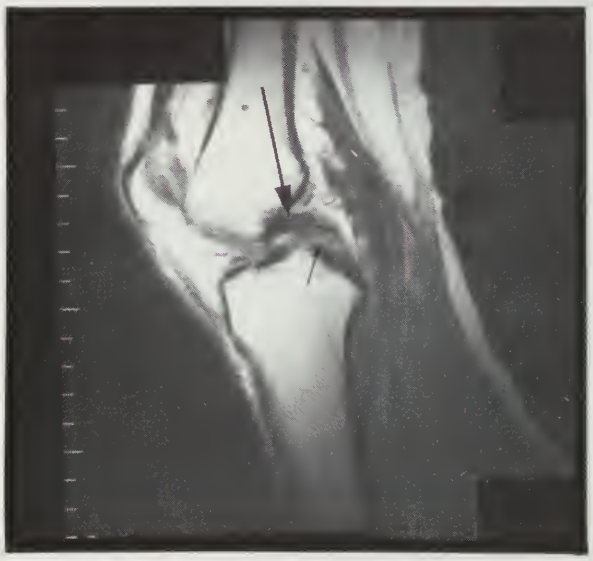
Teen pregnancy is one of the nation's most significant medical and social problems. Articles beginning on page 903 represent a broad range of thought on the topic. Guest editors for this issue are Carmine M. Valente PhD and Albert M. Antlitz MD of the Center for Health Education, Inc.

The views in this publication are those of the authors and do not necessarily reflect the opinion of the Medical and Chirurgical Faculty of the State of Maryland.

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NOVEMBER 1987

CURRENT TRENDS IN TEEN PREGNANCY IN MARYLAND:ABORTIONS AND BIRTHS TO WOMEN AGED 14 TO 17 FROM 1980 THROUGH 1985

A recent article published in the JAMA, October 16, 1987, presented results on the national figures for teenage births and abortions for 1974, 1980 and 1983 (Maciak, et al. 1987). This article reported a decline in the birth rate to teens between 1980 and 1983 and no change in the rate of abortions to teens. Given the serious implications of early childbearing, it's important to review the currently available data for Maryland. The data presented below are for teens aged 14 to 17. This is the age group when most are still in school and almost all pregnancies are unplanned. Hence, pregnancies among this group are likely to have an adverse impact on the lifeplans for these young people.

The Data: The results shown here are for all births and all abortions reported by the Department of Health and Mental Hygiene (DHMH), Division of Program Evaluation and Statistical Support and the DHMH Center for Health Statistics. The rates shown are based on the estimated population of women aged 14 to 17 as computed by the Department of State Planning, Office of Planning Data. In reviewing these results, it must be kept in mind that these rates are only preliminary estimates. Given that the population estimates are subject to revision the time trends shown here can only be taken as an approximation of the true trends throughout the State.

In assessing the figures for abortions, it should be noted that it is very likely that there is under-reporting of abortions and that no abortions performed for Maryland women outside of the State are included in these rates. In assessing the pregnancy rates, which are the sum of the birth and abortion rates, it should also be noted that between 10 and 15% of pregnancies result in spontaneous abortions or stillbirths, none of which are reported here. (See Maciak, et al. 1987). For these two reasons, the abortion and pregnancy rates presented here are definitely conservative estimates. However, because the above cited biases in these data have probably remained fairly constant over the last five years, these rates should provide a valid picture of changes over time.

Key findings:

Maryland State, See Figure 1

For the State overall, there has been a slight downward trend in the rate of abortions, while the birth rate has remained fairly constant. As a result, the total pregnancy rate has dropped only slightly from a high of 50 per 1000 in 1981 to a low of 44 per 1000 in 1985. Among women who are classified as "non-white", the pattern is

quite similar with the birth rate remaining almost constant at 42 per 1000 while the abortion rate has declined from a high of 38 in 1981 to a low of 30 per 1000 in 1985. Among women classified as "white" the birth rate has remained almost constant between 14 and 15 per 1000 while the abortion rate has declined from the 1981 high of 22 per 1000 to a low in 1985 of 17 per 1000.

Maryland Counties, Excluding Baltimore City (See Figure 2)

As was the case for the State as a whole, the peak rates were in 1981 with some decline in the pregnancy rate (from 41 to 31 per 1000) and abortion rate (from 23 to 17 per 1000) while the birth rate has remained almost constant at between 15 and 17 per 1000. For women classified as "non-white", the trend is slightly different. Although pregnancies and, in turn, abortions have declined since 1981 which was a peak year, the birth rate has remained almost constant. In fact, there recently have been very slight increases in the birth rate and the abortion rate to levels of 29 and 19 per 1000 respectively. This has led to a slight upturn in the overall pregnancy rate. For women classified as "white" there has been a steady although very modest decline in the abortion and pregnancy rate. The birth rate has remained almost constant, dropping from a high of 14 to a low of 12 per 1000.

Baltimore City (See Figure 3)

The pattern for Baltimore City is quite different from that for the State and the Counties. All rates are dramatically higher and the trend has been one of a steady increase in the birth rate and in turn the pregnancy rate between 1980 and 1984. The peak birth rate of 60 per 1000 was reached in 1984 and has remained unchanged in 1985. The abortion rate has fluctuated from 42 to 48 per 1000, reaching its peak in 1984 and dropping to 43 in 1985. This gives a maximum pregnancy rate of 108 per 1000 in 1984 dropping to 103 per 1000 in 1985.

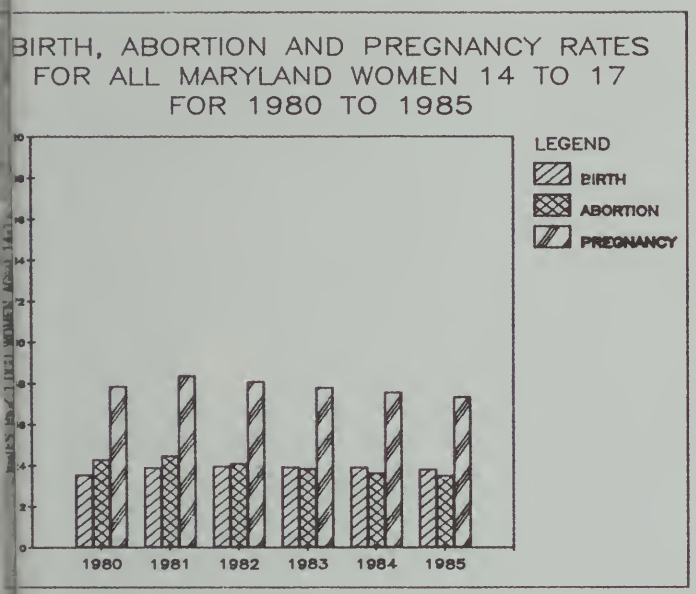
For women classified as "non-white", the pattern is almost the same with the highest birth rates occurring in 1984 and 1985 at 66 and 65 per 1000 respectively and the highest pregnancy rates in 1983, 1984 and 1985 at 113, 117 and 113 per 1000 respectively. Abortion rates have fluctuated between 48 and 52 per 1000. For women classified as "white", while the rates are consistently lower, there is also a pattern of increased pregnancy rates although the increase is moderate: from a low of 60 per 1000 in 1980 to a high of 69 per 1000 in 1984. Since 1980, the birth rate increased from 31 per 1000 to a high of 40 per 1000 in 1985. Abortion rates have fluctuated from a high of 31 in 1983 and 1984 to a low of 23 per 1000 as of 1985.

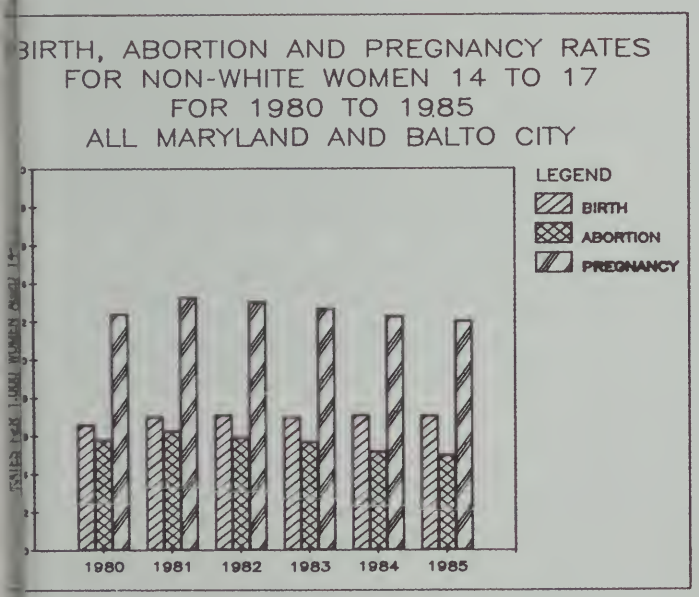
DISCUSSION: Despite national reports of declining teen pregnancy, this preliminary presentation of abortion, birth and pregnancy rates for the young teens aged 14-17 in Maryland suggests that there is much justification for continued concern about the problem in this State. While overall there has been a diminution in the rate of abortion to these young women, the rate of birth remains quite constant. As observed nationally, those classified as "non-white" continue to be at much higher risk of pregnancy. For Baltimore City, it appears that the Statewide pattern of a peak of pregnancies in 1981 does not apply. In fact, there seems to have been a steady increase in these rates up until 1984 when over 10% of Baltimore's women aged 14 - 17 reported either a birth or an abortion. Based on these findings it is clear that continued expansion of services to prevent teenage pregnancy is more than warranted.

Submitted-Sam Clark and Bonnie Birkel, Division of Family Planning, Community Health Surveillance Administration, Department of Health and Mental Hygiene, October 1987.

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FIGURE 1





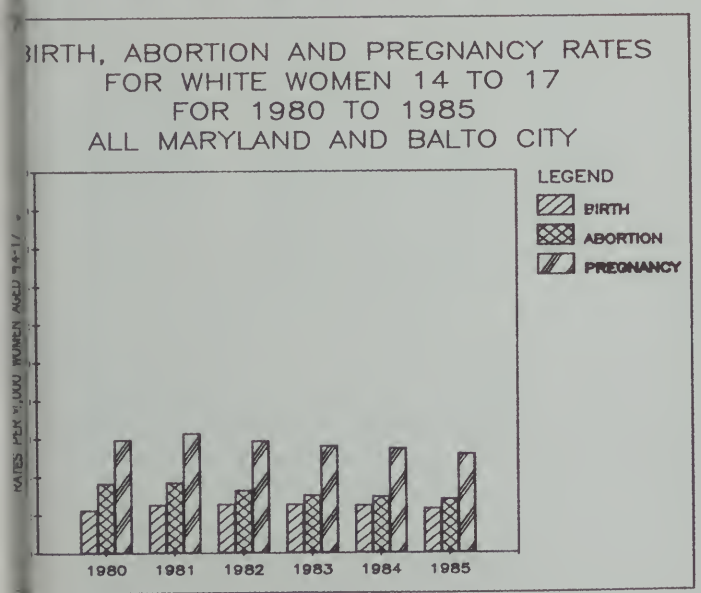
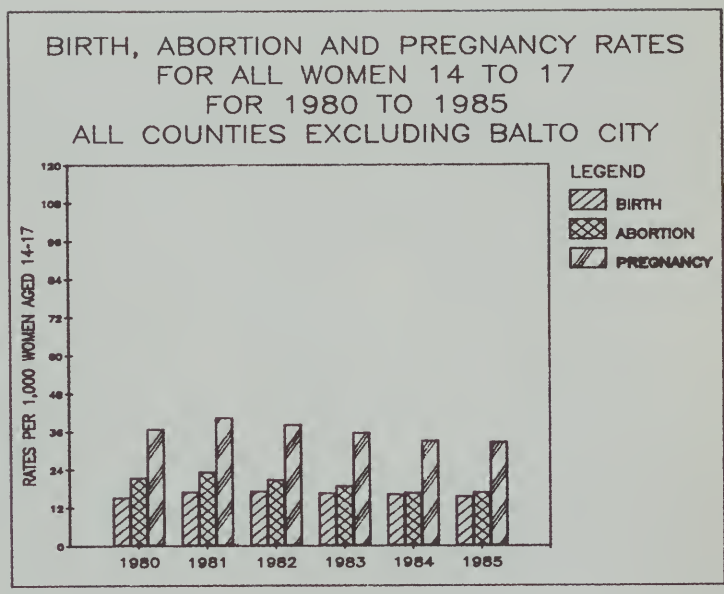
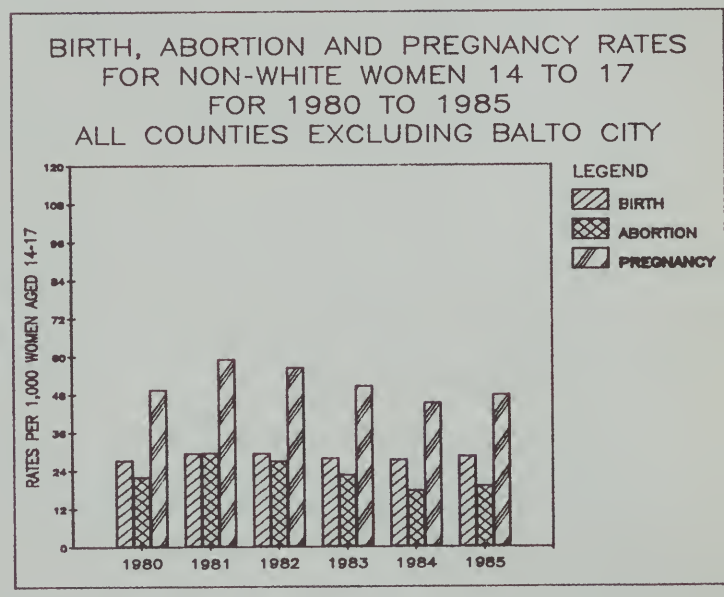


FIGURE 2





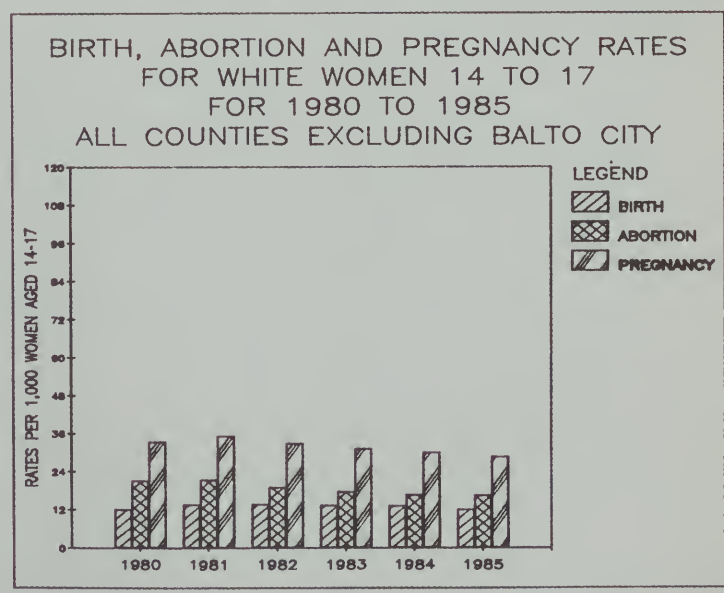
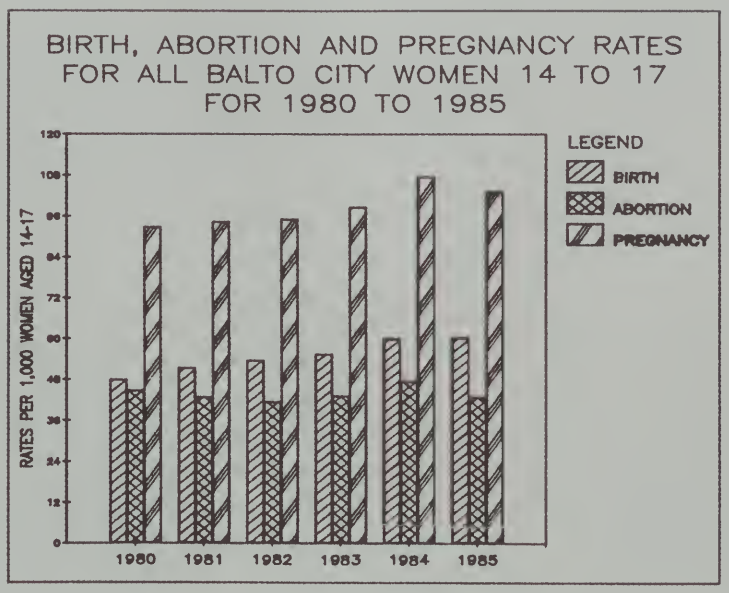
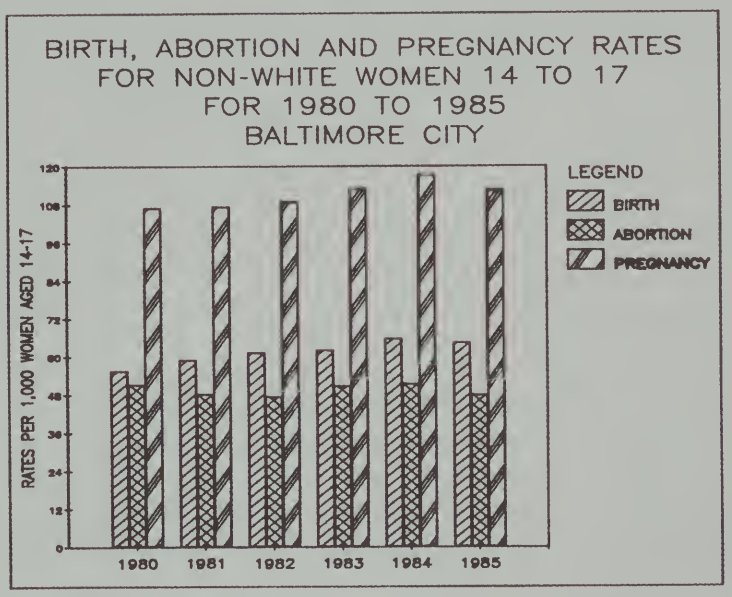
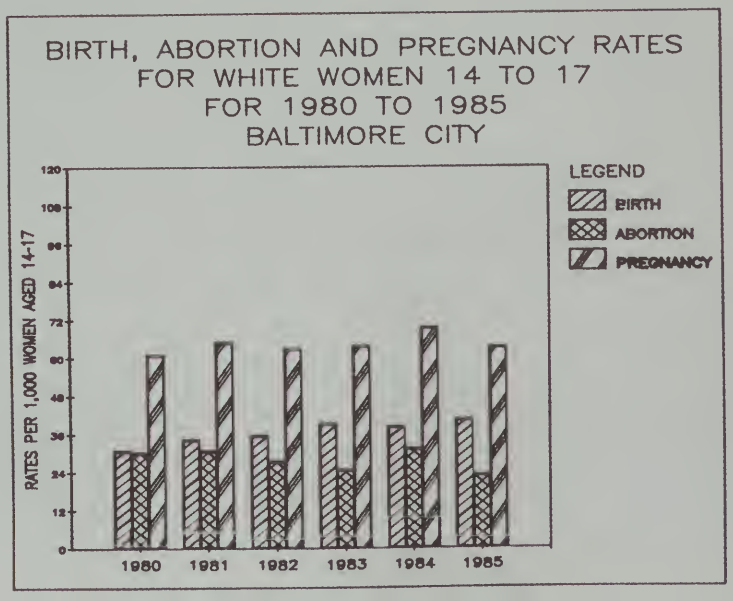


FIGURE 3


BIRTH, ABORTION AND PREGNANCY RATES
FOR ALL BALTO CITY WOMEN 14 TO 17
FOR 1980 TO 1985
RATES PER 1,000 WOMEN AGED 14-17
0
12
24
36
48
60
72
84
96
108
120
1980
1981
1982
1983
1984
1985
LEGEND
BIRTH
ABORTION
PREGNANCY


BIRTH, ABORTION AND PREGNANCY RATES
FOR NON-WHITE WOMEN 14 TO 17
FOR 1980 TO 1985
BALTIMORE CITY
RATES PER 1,000 WOMEN AGED 14-17
0
12
24
36
48
60
72
84
96
108
120
1980
1981
1982
1983
1984
1985
LEGEND
BIRTH
ABORTION
PREGNANCY


BIRTH, ABORTION AND PREGNANCY RATES
FOR WHITE WOMEN 14 TO 17
FOR 1980 TO 1985
BALTIMORE CITY
RATES PER 1,000 WOMEN AGED 14-17
0
12
24
36
48
60
72
84
96
108
120
1980
1981
1982
1983
1984
1985
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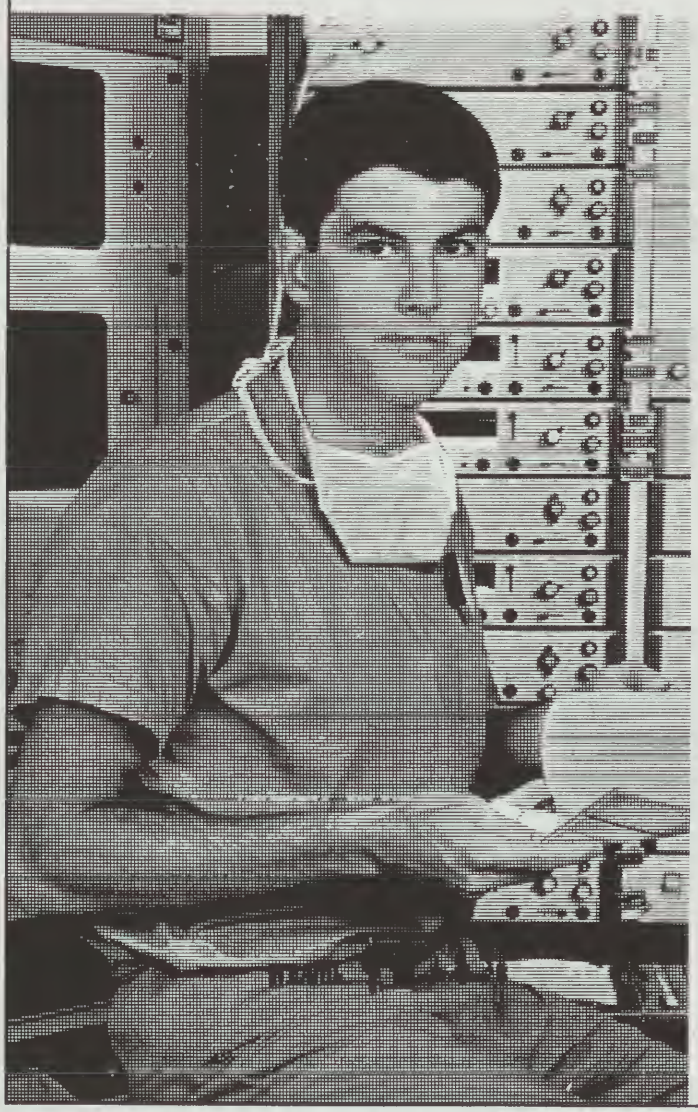
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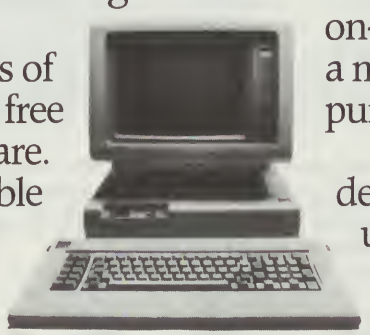
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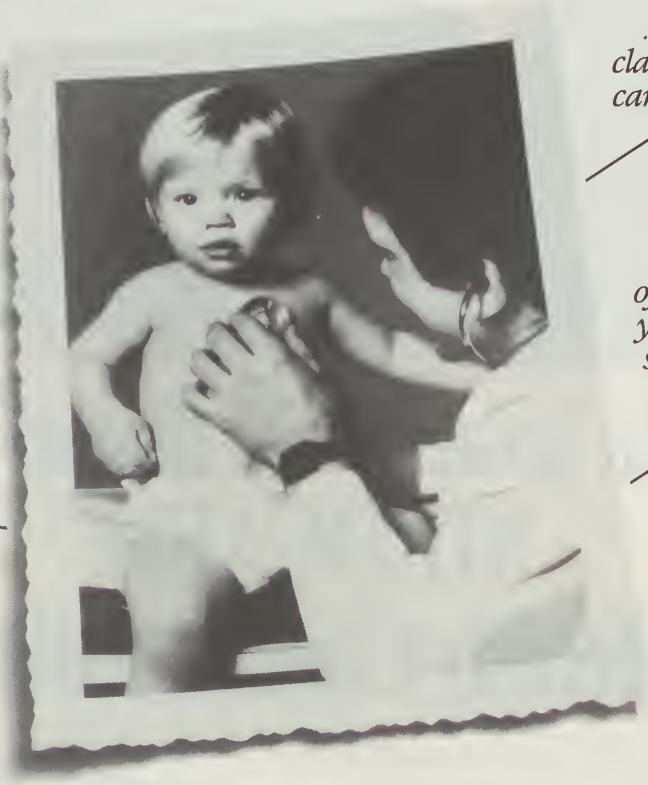
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Executive Director's Newsletter

November 1987

MEDICARE PROVISION

One of the provisions of the Omnibus Budget Reconciliation Act of 1986 requires that on and after October 1, 1987, if a nonparticipating physician plans to perform an elective surgical procedure for which he charges at least $500 and he does not intend to accept the Medicare assignment, he must furnish the patient with adequate charge information to calculate his or her potential liability for the surgery. Specifically, the patient must be given a written disclosure of the physician's estimated actual charge for the surgery as well as the estimated Medicare approved charge and the difference between the physician's actual charge and the Medicare approved charge. The difference represents the patient's liability.

Until December 31, 1987 physicians should use either customary and prevailing charge data previously furnished them by the carrier or payment information from assigned claims to determine the Medicare allowance for elective surgery they plan to perform.

In January physicians can obtain Fee Screen Year 1988 charge data from Blue Cross and Blue Shield of Maryland by submitting a written request that identifies the procedures for which charge data is needed to Medicare Profile Development Department, 700 East Joppa Road, Baltimore, MD 21204. Pennsylvania Blue Cross and Blue Shield will mail the data to Montgomery and Prince George's County physicians on November 23.

HEALTH CLAIMS ARBITRATION

Chapter 640 of the 1986 Acts of the General Assembly of Maryland contains two subsections stating "Every physician who is licensed to practice medicine in the State, and who is a resident of the State, shall be available to serve as an arbitrator of Health Care Malpractice Claims" and "The biographical statements sent to the parties under this subsection shall have been updated within the year."

Every physician falling under the above description will soon receive an update form in the mail. You are required by law to return this form promptly.

If you have any questions about the update form, contact Mike Murray at the Faculty offices.

MAAC SEMINAR

The last of three seminars on Maximum Actual Allowable Charge policies is scheduled for Monday, December 14 from 2-4 p.m. at the Faculty offices. Representatives from HCFA, and from the Pennsylvania and Maryland Blue Cross and Blue Shield Carriers will provide information on this complex federal reimbursement mechanism.

This is a crucial matter, and we urge physicians and their staff to attend. To register, free of charge, contact Patricia Munoz or Joann Cirillo at the Faculty offices.

PHYSICIANS FEE GUIDE

Recently, all Maryland physicians were mailed a copy of the Health Care Shopper's Guide and Doctor's Fees Charged to Medicare Patients, booklets issued by the Attorney General's Office. Every physician should review the information listed under his/her name immediately. If you have any questions regarding the accuracy of the information, write to Bill Leibovici, Office of the Attorney General, Munsey Building, Calvert and Fayette Sts., Baltimore, MD 21202-1909.

DUES BILLS

The 1988 dues notices were mailed the first week of November. In order to qualify for physician's defense panels, dues must be paid by January 31, 1987.

DUES DEDUCTIBILITY

Under the Tax Reform Act of 1986, most physicians' membership dues are still tax deductible either as a business expense or as a miscellaneous itemized deduction. Physicians conducting business through sole proprietorship, partnership, or "Subchapter S" corporation may still deduct dues in their entirety as a business expense. Incorporated physicians or physicians employed by a corporation should have the corporation pay the dues, because the corporation may still deduct the dues in their entirety as a business expense. Employed physicians who pay their own dues may deduct the dues only insofar as the dues plus other miscellaneous itemized deductions exceed 2% of Adjusted Gross Income.

DECEMBER WORKSHOPS

On December 8 and 9, Med-Chi will sponsor a workshop, "How to Run a More Profitable Practice." The workshop, to be presented by nationally recognized Conomikes Associates, will be held in Annapolis on December 8 and in Baltimore on December 9. For registration and additional information, contact Pat Munoz or Joann Cirillo at the Faculty offices.

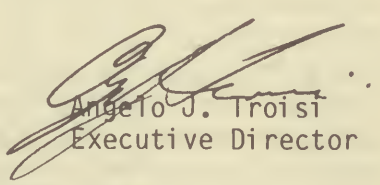
1988 ANNUAL MEETING

The 1988 Annual Meeting will be held Wednesday-Friday, April 27-29 in Baltimore. The meetings and exhibits will be held at the Baltimore Convention Center. The sleeping rooms will be at the Harbor Court Hotel, and the Presidential Banquet will be held on Thursday, April 28 at the Hyatt Regency Hotel. Mark your calendar now.

MEDICAL TALK SHOW

Med-Chi is sponsoring "Consultation," a medical talk show on WBAL Radio. The program airs from 8-9 every Thursday evening and features a variety of fascinating physician speakers and topics.

The program, hosted by John Stupak, consists of a short discussion of the topic followed by call-in questions from the listening audience. For a complete list of scheduled topics and speakers contact Nina Casey or Caroline Harman at the Faculty offices.



Angelo J. Troisi
Executive Director

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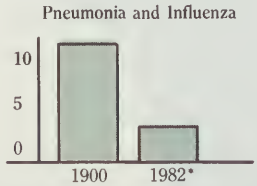
Center for Health Education, Inc.

The Center for Health Education, Inc., a non-profit organization, was established on April 12, 1982 to be a resource to physicians in enhancing their disease prevention and educational skills. CHE originated as a joint venture of the Medical and Chirurgical Faculty of the State of Maryland (Med-Chi, the State Medical Society) and Blue Cross and Blue Shield of Maryland.

The concept for CHE began with Med-Chi physicians who recognize that traditionally, medical education does not emphasize the skills physicians need to successfully educate their patients. This concept was supported by Blue Cross and Blue Shield of Maryland, which acknowledges that successful patient education can have a positive impact on the utilization of health services.

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Source: National Center for Health Statistics.

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RESEARCH: Assess physicians' needs in disease prevention and health promotion, their current practices and the obstacles they encounter in the educational process.

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IMPLEMENTATION: Disseminate materials and conduct Continuing Medical Education programs to assist physicians in educating patients.

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Adolescent Pregnancy: A Multispecialty Issue

The Center for Health Education, Inc. (CHE) is pleased to present this issue of the *Maryland Medical Journal* on Adolescent Pregnancy, developed in cooperation with the March of Dimes Birth Defects Foundation.

The number of American teenagers who become mothers each year is striking. According to the Children's Defense Fund, teen pregnancy is one of the most significant social problems facing the nation today. It carries with it grave costs:

- *for the teen*, who, as a result of the pregnancy, probably will drop out of school and never receive a high-school diploma and whose lifetime earnings will be half that of a woman who waited until age 20 to have her first child
- *for her baby*, who is significantly more likely to be born at low birth weight and therefore at substantially higher risk of death or birth defects, and who by age five will be more likely to have been admitted to a hospital because of an accident or gastrointestinal infection
- *for society*, which will bear much of the financial weight for these outcomes

The implication for greater physician involvement in the education, treatment, and care of the adolescent is equally striking. Physicians are in a key position to assess risk factors associated with early sexual activity and to counsel teens regarding pregnancy prevention strategies. Physicians are also in the forefront of providing prenatal services to adolescents. Here, the medical challenge is to reduce complications and thereby to improve the outcome of these pregnancies. Providing medical care for the teen mother and her child offers physicians an opportunity to enhance teen functioning and to ensure optimal growth and development for the child.

Because teen pregnancy is a multispecialty concern, this issue of *MMJ* contains information designed to assist physicians in educating, treating, and caring for adolescents. The article by Beverly S. Raff PhD, of the March of Dimes Birth Defects Foundation, introduces the theme by pointing out "as the first and often only contact an adolescent may have with the health care system, a physician is in an excellent position to offer support and education to reduce the risks associated with pregnancy."

In the next article, Greg R. Alexander MPH, ScD and Gary Popoli MA summarize the trends in adolescent pregnancy and pregnancy outcome. The data presented highlight the ongoing prevalence of the problem and the concomitant risks to teens bearing children. Bronwyn Mayden summarizes the work of the Maryland Task Force on Teen Pregnancy.

Joanne E. Steane MD and Felix P. Heald MD review the physical and emotional changes that take place during adolescence and their effect on pregnancy. Susan Panzarine RN, PhD and John Santelli MD, MPH examine the risk factors associated with early sexual activity and early unplanned pregnancy. They note that a working knowledge of the risk factors for early sexual activity is as important for the physician who cares for adolescents as is knowledge of cardiovascular risk factors for the internist.

The next two articles address medical management and medical complications associated with adolescent pregnancy. John T. Repke MD reviews the prenatal care components involved in managing the pregnant adolescent. He states "Appropriate medical management of pregnant adolescents may serve to reduce the medical complications associated with teen pregnancy thereby improving the outcome of these pregnancies and the outlook for the next generation." Devereux N. Saller, Jr., MD and M. Carlyle Crenshaw, Jr., MD identify the most common complications of adolescent pregnancy. While adolescent pregnancy is associated with increased maternal and perinatal morbidity and mortality, pregnancy outcome can be improved with comprehensive prenatal care.

Sexually transmitted infections among teenagers are dealt with by Janet B. Hardy MD, who provides an overview of AIDS and of the more common STDs of adolescence and offers prevention strategies. Other life-style factors associated with pregnancy outcome are examined by Linda S. Martin RN, MPH and Carmine M. Valente PhD. Their article looks at the effects of smoking, alcohol use, drug use, and poor nutrition on pregnancy outcome and describes how the physician can best assess risk status and succeed in influencing risk behaviors.

The psychological and social considerations in adolescent pregnancy management are presented by Priscilla Rowe Huff MSW, LCSW along with strategies to assist the adolescent with pregnancy management

and to encourage emotional growth. Marilee Comfort MPH, PhD and colleagues examine the risks associated with adolescent parenthood as well as factors seen as influencing adolescent parenting practices. The next article discusses adolescent pregnancy prevention and is presented by Judith D. Rubin MD, MPH and Prasanna Nair MD, MPH, who address interventions aimed at primary prevention of adolescent pregnancy.

The last two articles provide information about community resources. Donna J. Petersen MHS provides a list of community support services physicians may find useful in working with pregnant adolescents. Beverly S. Raff PhD adds a brief list of resources available to physicians through the March of Dimes.

We thank the authors for their contributions and the March of Dimes Birth Defects Foundation for its interest and support in planning and preparing this issue. A special thanks to Donna J. Petersen MHS for her assistance throughout the preparation of this issue. We also thank Annelies Zachary MD, Polly H. Roberts MD, and Med-Chi's Infant, Child and Adolescent Health Subcommittee for their assistance.

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These articles may not necessarily reflect the opinion of the Center for Health Education, Inc. or the March of Dimes Birth Defects Foundation.

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The Center for Health Education, Inc. was established to assist physicians in enhancing their disease prevention and education skills.

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Introduction: Reducing the Risks

BEVERLY S. RAFF PhD
March of Dimes Birth Defects Foundation

In 1986 nearly half a million adolescents had babies. Many of these girls did not know the risks involved in becoming pregnant and far too many did not receive early, adequate prenatal care. Reducing the risks and the incidence of low birth weight and birth defects in babies born to teens also involves education. Adolescents must be taught about the health risks of pregnancy and the need for early, comprehensive prenatal care. They need to be reminded that these risks diminish with time and maturity. Physicians are in a key position to educate adolescents about these risks.

The public health problem that surrounds adolescent pregnancy is clearly defined. Both a young mother and her baby are affected:

- A teenager is one and one-half times more likely to deliver a low birth weight baby.[1]
- Infants of low birth weight (less than 2500 grams) are almost 40 times more likely to die during the neonatal period than is a normal birth weight infant. Low birth weight is associated with some physical disabilities, neuro-developmental handicaps, and learning disorders.
- Babies of adolescents are at increased risk of stillbirth, prematurity, mental retardation, and early death.
- The death rate from pregnancy complications is much higher among girls who give birth under age 15 than among mothers past their teen years.
- Adolescents often have premature or prolonged labor.

Sadly, the very group that needs assistance and education about the risks of adolescent pregnancy—the adolescents—often fails to receive such support. The March of Dimes has developed programs to help adolescents receive the health information they need to make educated decisions about childbearing.

It is essential that adolescents who don't defer pregnancy receive prenatal care as early as possible. In addition to the risks for the baby, there is a greater potential for adolescents to use alcohol, tobacco, and drugs; practice poor nutrition, be anemic, have pregnancy induced hypertension, suffer from sexually transmitted disease; or experience an increased incidence of cephalopelvic disproportion and abruptio placentae.[2]

Research overwhelmingly shows that prenatal care reduces the incidence of low birth weight, especially among babies born to high-risk women. "Babies whose mothers receive no prenatal care are three times more likely to suffer low birth weight, with commensurately greater risks of birth defects and death."[3]

Too often teens receive inadequate childbearing education and then inadequate prenatal care. As a group, they are less likely to seek and to find adequate medical attention. In fact, almost half of all pregnant adolescents do not receive early (first trimester) prenatal care, and they are almost three times as likely as older mothers to receive late or no prenatal care.[1]

The March of Dimes funds programs that make early prenatal care available to pregnant adolescents. We recognize that prenatal care and education for all pregnant women is essential if we are to reduce the number of babies born with birth defects.

From 1980 to 1984, births to US teens declined by 15 percent. The assistance of physicians in continuing this decline is crucial. As the first and often only contact an adolescent may have with the health care system, a physician is in an excellent position to offer support and education to reduce the risks associated with pregnancy.[4]

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Adolescent Pregnancy in Maryland: Trends and Outcomes

GREG R. ALEXANDER ScD and GARY POPOLI MA

Trends in adolescent pregnancy and related pregnancy outcomes were examined using Maryland vital record data from the years 1981 to 1985. While the number and rates of live births, induced abortions, and estimated pregnancies to Maryland adolescents (<18 years old) declined over the five-year period, 3,176 live births and 3,125 induced abortions were recorded in 1985. Live births to adolescent mothers, when compared to the offspring of mothers 18 to 34 years of age, were more likely to be of low birth weight and to exhibit congenital malformations. Further, higher proportions of complications of pregnancy and labor and a lower level of prenatal care were recorded for adolescents.

Dr. Alexander is an assistant professor, Department of Maternal and Child Health, School of Hygiene and Public Health, The Johns Hopkins University, and Popoli is Manager, Data Information Center, Preventive Medicine Administration, Maryland Department of Health and Mental Hygiene, Baltimore.

The rise in adolescent pregnancy rates in the United States during the 1970s attracted considerable attention. Among the more worrisome aspects of that trend was a marked increase in birth rates to younger adolescents (≤16 years of age) during the early part of that decade.[1] In addition to the elevated infant and maternal health risks that accompany pregnancy in younger adolescents, an often overwhelming array of immediate and future psychological, educational, socioeconomic, and vocational problems must be faced. In light of the dismal prospects awaiting many pregnant adolescents, a varied range of interventions evolved at federal, state, and local levels. While a national down-turn in adolescent pregnancy rates was marshaled in with the 1980s,[2] the need for ongoing programmatic involvement has not diminished and the societal perplexities of addressing this complex problem remain a matter of professional consternation.

In Maryland, as throughout the nation, adolescent pregnancy continues to be an issue of public focus. A recent Maryland State Task Force report on adolescent pregnancy (see article p. 911) concluded with a reaffirmation of the perceived detrimental societal effects of this phenomenon and a call for a long-term commitment and action toward its abatement.[3] In our study we detail trends in adolescent pregnancy in Maryland during the first half of the 1980s and examine the outcomes of these pregnancies in order to provide a current assessment of the potential risks involved. Pregnancies to adolescent minors (less than 18 years of age) are highlighted in recognition of their increased pregnancy related medical, psychological, and social risks.

Data and Methods

Using vital record data provided by the Maryland Department of Health and Mental Hygiene we selected records of events to Maryland resident females from live birth, induced abortion, and fetal death files for the years 1981 to 1985. Reportable fetal deaths included those of 20 or more weeks' gestation. Induced abortion data in Maryland were obtained on a voluntary reporting basis.

Estimates of pregnancies in this report are based on the summation of reported live births, induced abortions, and fetal deaths. This technique provides an underestimate of the actual number of pregnancies because some out-of-state events to residents, fetal deaths prior to 20 weeks' gestation, and unreported events (in particular, abortions) are not included. While unreported fetal deaths before 20 weeks' gestation would represent presumably the majority of underestimated pregnancies, induced abortions also may be appreciably underrecorded in the absence of a mandatory statewide reporting system.

Results

Annual outcomes of pregnancy to Maryland resident adolescent (<18 years of age) are detailed in Table 1. The reported 3,351 live births to adolescent mothers in 1981 represent 5.8 percent of the total reported live births to Maryland-resident females of all ages in that year. By 1985, both the number of live births to adolescents (3,176) and the percentage of live births to adolescents (4.7 percent) had decreased, suggesting an ongoing reduction in these indices over the period.

From 1981 to 1985, a decline was also evident both in the number of induced abortions to adolescents (4,381 to 3,125) and in the adolescent abortion ratio (1,233.7 to 983.9). By the end of this five-year period, slightly less than one induced abortion was reported for every live birth to adolescents. Concurrently, a recognizable temporal trend in fetal deaths to adolescent mothers was not apparent.

The annual number of estimated pregnancies (live births, induced abortions, and fetal deaths) to adolescent mothers decreased steadily from 1981, reflecting reductions in both the numbers of live births and of induced abortions. The proportion of estimated pregnancies to adolescents of the total estimated pregnancies in Maryland also declined from 8.9 percent in 1981 to 6.8 percent in 1985.

Table 2 provides average annual reported outcomes of pregnancy by age-of-mother categories. These annual averages are derived from 1983 to 1985 data from resident Maryland females. The average annual number of estimated pregnancies in Maryland for this period was 91,359 with 72 percent resulting in a live birth and nearly 28 percent terminating in an induced abortion.

Very young adolescents (≤15 years old) had the lowest proportion of estimated pregnancies producing a live birth (41.4 percent) and the highest percentage resulting in an induced abortion (57.9 percent). For all adolescents (<18 years), half their estimated pregnancies ended in induced abortion compared to approximately 26 percent for older females. Correspondingly, the highest abortion ratios were found in the adolescent group (1,013.4) and, particularly, in the ≤15 year-old group (1,399.6).

Pregnancy outcome risk indicators by age group are also detailed in Table 2. Fetal death ratios were lowest in the 18–34 year age group and highest in the adolescent age groups. For live births, adolescents displayed higher proportions of low birth weight (<2500 grams) births. The eldest age group (≥35 years) portrayed the highest proportion of reported concurrent illnesses with the adolescent group only slightly higher than the 18 to 34-year-old group. However, an elevated proportion

Table 1. Annual Reported Outcomes of Pregnancy among Maryland Resident Adolescent Mothers <18 Years of Age

Year	# Live Births (% of All MD Live Births[1])	# Induced Abortions (Abortion Ratio[2])	# Fetal Deaths (Fetal Death Ratio[3])	# Estimated Pregnancies[4] (% of All MD Est. Preg.[5])
1981	3,351	4,381	38	7,970
	(5.77)	(1,233.7)	(10.7)	(8.85)
1982	3,456	3,810	47	7,313
	(5.42)	(1,102.4)	(13.6)	(8.08)
1983	3,293	3,482	41	6,816
	(5.15)	(1,057.4)	(12.5)	(7.55)
1984	3,259	3,252	45	6,556
	(4.99)	(997.9)	(13.8)	(7.21)
1985	3,176	3,125	36	6,337
	(4.67)	(983.9)	(11.3)	(6.82)

1. (Live births to MD adolescent mothers/total MD live births) × 100.
2. (Induced abortions/live births) × 1000.
3. (Fetal deaths/live births) × 1000.
4. Estimated pregnancies = (live births + induced abortions + fetal deaths).
5. (Estimated MD adolescent pregnancies/estimated total MD pregnancies) × 100.

Table 2. Average Annual Reported Outcomes of Pregnancy among Maryland Resident Females, by Age of Mother
(Based on 3-Year Average of 1983 to 1985 Maryland Data)

Outcome of Pregnancy	Age <15	16–17	<18	18–34	35+	Total[1]
Induced abortions	951.3 (57.9%)	2,335.0 (47.4%)	3,286.3 (50.0%)	20,588.0 (26.1%)	1,236.3 (21.0%)	25,111.0 (27.5%)
Fetal deaths	12.3 (0.7%)	28.3 (0.6%)	40.7 (0.6%)	394.0 (0.5%)	47.7 (0.8%)	505.7 (0.6%)
Live births	679.7 (41.4%)	2,563.0 (52.0%)	3,242.7 (49.4%)	57,857.7 (73.4%)	4,590.7 (78.1%)	65,742.3 (72.0%)
Estimated pregnancies	1,643.3 (100.0%)	4,926.3 (100.0%)	6,569.7 (100.0%)	78,839.7 (100.0%)	5,874.7 (99.9%)	91,359.0 (100.1%)
Pregnancy Outcome Risk Indicators:						
Abortion ratio	1,399.6	911.0	1,013.4	355.8	296.3	382.0
Fetal death ratio	18.1	11.0	12.6	6.8	10.4	7.7
For Live Births Only:						
% Low birth weight[2]	13.0	11.4	11.8	7.4	6.8	7.6
% C-section	14.5	16.6	16.1	23.8	30.6	23.9
% Complctn of preg.	19.9	17.5	18.0	13.8	15.5	14.1
% Complctn of labor	33.4	32.1	32.4	27.2	27.3	27.5
% Concurrent illness	6.7	6.8	6.8	6.1	8.2	6.3
% Congenital malform.	2.4	2.2	2.2	1.4	1.2	1.5

1. Total includes unknown ages.
2. Low birth weight = <2500 grams.

of congenital malformations and complications of pregnancy and labor were evident in the live births to adolescent mothers. The percent of live births delivered by cesarean section was highest in the eldest age group (30.6 percent) and lowest in the youngest adolescent group (14.5 percent).

Average annual outcomes of pregnancy for adolescent mothers (<18 years) are depicted by maternal race and marital status in Table 3. Nearly 92 percent of estimated pregnancies to Maryland adolescents were to unwed females, and 50.1 percent were to nonwhite females. The largest proportions of estimated pregnancies terminating in an induced abortion were found in the white unwed (65.8 percent) and the nonwhite unwed (44.4 percent) groups. The abortion ratio for white unwed adolescents (1,934.8 induced abortions per 1,000 live births) indicated nearly two reported induced abortions for every single live birth. Within racial groups, lower proportions of fetal deaths were observed for unwed females who also exhibited much higher abortion ratios. However, due to the small average annual number of estimated pregnancies (50.3) to nonwhite wed adolescents, the elevated fetal death ratio (253.8 fetal death per 1,000 live births) may largely reflect small number fluctuation or reporting irregularities.

Based on live-birth data only, nonwhites exhibited a higher average annual percentage of low birth weight newborns (Table 3), with the infants of nonwhite unwed adolescent mothers demonstrating the greatest risk among the four race-marital status groups. Live births to nonwhite wed adolescents were least likely to represent a first pregnancy (57.1 percent) and the percentage nulligravida was highest (88.1 percent) for the white unwed group. White wed adolescent mothers were more likely to initiate prenatal care in the first or second trimester (91.9 percent) than the average for all adolescents (85 percent). However, only 28 percent of adolescent mothers delivering a live birth reported "adequate" prenatal care as defined by the Institute of Medicine's Adequacy of Prenatal Care Index, which takes into account the month prenatal care began, the number of visits, and gestational age.[4]

Of the 67,985 live births to Maryland resident mothers reported in 1985, a father less than 18 years old was recorded for 858 (1.3 percent). Nearly 78 percent (665) of these live births to adolescent mothers recorded an adolescent father (<18 years). Table 4 provides age of father information for live births to adolescent mothers (<18 years) by maternal race and marital status.

Over 20 percent of live births to adolescent mothers reported a father less than 18 years of age. For another 15 percent of the live births to adolescent mothers in 1985, the age of father was not recorded; nonreporting of age of father was particularly evident for live births to unwed adolescent mothers. The proportion of fathers ≥18 years was nearly identical in the white and non-

Table 3. Average Annual Reported Outcomes of Pregnancy among Maryland Resident Females <18 Years of Age, by Maternal Race and Marital Status
(Based on 3-Year Average of 1983 to 1985 data)

Outcome of Pregnancy	Race and Marital Status				
	White Wed	White Unwed	Nonwhite Wed	Nonwhite Unwed	Total
Induced abortions	25.0 (5.0%)	1,791.0 (65.8%)	9.3 (18.5%)	1,461.0 (44.4%)	3,286.3 (50.0%)
Fetal deaths	6.7 (1.3%)	7.0 (0.3%)	8.3 (16.5%)	18.7 (0.6%)	40.7 (0.6%)
Live births	470.0 (93.7%)	925.7 (34.0%)	32.7 (65.0%)	1,814.3 (55.1%)	3,242.7 (49.4%)
Estimated pregnancies	501.7 (100.0)	2,723.7 (100.1)	50.3 (100.0)	3,294.0 (100.1)	6,569.7 (100.0)
Pregnancy Outcome Risk Indicators:					
Fetal death ratio	14.3	7.6	253.8	10.3	12.6
Abortion ratio	53.2	1,934.8	284.4	805.3	1,013.4
For Live Births Only:					
% Low birth weight	8.2	8.8	10.2	14.2	11.8
% Nulligravida	80.8	88.1	57.1	75.6	79.7
% 1–2 trimester prenatal care	91.9	86.1	84.6	82.6	85.0
% Adequate prenatal care	40.9	32.8	25.5	22.9	28.3

Table 4. Age of Father of Live Births to Mothers <18 Years by Maternal Race and Marital Status
(1985 Live Births to Resident Maryland Mothers)

Age of Father	Maternal Race and Marital Status: White Wed	White Unwed	Nonwhite Wed	Nonwhite Unwed	Total
<18	37 (9.4%)	145 (15.9%)	2 (7.1%)	481 (26.1%)	665 (20.9%)
≥18	353 (89.8%)	571 (62.5%)	25 (89.3%)	1092 (59.3%)	2041 (64.3%)
Unknown	3 (0.8%)	198 (21.7%)	1 (3.6%)	268 (14.6%)	470 (14.8%)

white wed groups (89.8 percent and 89.3 percent). The white and nonwhite unwed groups were also similar in their proportion of nonadolescent fathers (62.5 percent and 59.3 percent).

Discussion

The reduction in number of births and estimated pregnancies to Maryland adolescents during the early 1980s was in keeping with national trends.[2,5] It is recognized that Maryland's adolescent birth rates lag behind the national average.[3] In 1981, live births to adolescents composed 5.8 percent of total live births in Maryland, and estimated pregnancies to adolescents constituted 8.85 percent of the total estimated pregnancies in Maryland. Reported 1981 data for another Atlantic coastal state (SC) and the United States[6,7] reveal respective percentages of total live births to adolescent mothers of 7.6 percent (SC) and 5.4 percent (US) and respective percentages of total estimated pregnancies to adolescents of 8.9 percent (SC) and 7.6 percent (US). The 1981 ratio of induced abortions to 1,000 live births to adolescents in Maryland was 1,233.7 compared to 435.9 (SC) and 969.5 (US).[6,7]

While the source of the decline in annual numbers of births and estimated pregnancies to adolescents observed in Maryland and the nation during this period remains unclear, demographic and societal influences, augmented to an unknown extent by programmatic efforts, may largely underlie these trends. In Maryland, a number of well-recognized research and intervention activities,[8,9] in addition to publicly promoted efforts, have been undertaken over the last decade.

Nearly two-thirds of the estimated pregnancies to white unwed adolescents in Maryland during this study period terminated in an induced abortion, thereby dramatically reducing the possible number of out-of-wedlock live births to these women. While recent reports suggest a lower than average risk of morbidity and mortality from abortion procedures to adolescents,[10,11] the current level of abortion by Maryland adolescents, as indicated by these data, has important implications for both providers and planners of health services. With over 50 percent of all Maryland adolescent pregnancies terminating in an induced abortion there are compelling reasons to ensure availability of accurate induced abortion data in order to identify current needs for services and to target specific population groups and geographic areas for programming. To the extent the current practice of voluntary reporting of induced abortions may result in data containing systematic biases and underrepresentations of actual utilization levels, limited resources may be misallocated in less than efficient and effective ways due to a skewed portrayal of events provided by a less than accurate data base. A mandatory statewide induced-abortion reporting system is necessary in the development and conduct of a well-targeted and comprehensive state-level intervention strategy.

Previous reports have associated pregnancy in adolescents with increased medical complications including toxemia and immaturity.[5,12,13] Although the extent to which some of these risks reflect biological immaturity as opposed to compounded socioeconomic pressures has been the subject of investigation,[14,15] these Maryland data confirm higher proportions of reported pregnancy related medical complications to adolescents. Further, the higher incidence of congenital malformations exhibited among newborns to Maryland adolescents corresponds with other investigations.[16]

Over 20 percent of the estimated pregnancies during this period were to multigravid adolescents. While this proportion is fairly consistent with other reports,[6] it reveals a disconcerting level of repeated pregnancy during the adolescent period and indicates the need to further promote educational efforts to both wed and unwed mothers regarding the importance of planning and adequately spacing pregnancies.

Although 85 percent of Maryland adolescents producing a live birth began prenatal care before the third trimester (a proportion that remained nearly constant throughout the five years investigated here), less than 29 percent (compared to 55 percent for older women) reported "adequate" prenatal care. Similarly deficient levels of prenatal care by pregnant adolescents have been reported elsewhere[6,13] and emphasize the need for public and private efforts to encourage early initiation of prenatal care and compliance with the established schedule of visits.

The prospect of children bearing and raising children is a particularly disturbing aspect of the broader adolescent pregnancy issue. Based on Maryland live births

from 1985, less than 40 live births were to wed parents both under 18 years of age. The clear majority of live births to adolescent mothers (<18 years old) report a father at or above the age of majority. Educating adolescent and adult males involved with adolescent females about the responsibilities of sexual activity and parenting should not be overlooked.

These data estimating pregnancies to Maryland adolescents highlight the ongoing prevalence of this problem and the persistent concomitant risks involved. Prevention remains the preferred approach to this issue. Physicians can play an important role in this regard by initiating discussions about sexuality and reproductive health with their adolescent patients. With over 25 percent of Maryland's adolescent pregnancies occurring in females 15 years old and younger, these individual preventive interventions should begin early.

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Summary Report: Governor's Task Force on Teen Pregnancy

BRONWYN W. MAYDEN

The author is Executive Director, Governor's Council on Adolescent Pregnancy.

In 1984, a Task Force on Teen Pregnancy was appointed by the Governor of Maryland. The Task Force was charged to:

- Examine the issues of teen pregnancy in Maryland.
- Explore the current level of services offered by public and private agencies in the state.
- Identify gaps in the coordination and delivery of services.
- Recommend a comprehensive approach to reduce the incidence of teen pregnancy and to help teenaged parents and their children become self-sustaining.

In September 1985 the Task Force issued its report, "A Call to Action," which contained eighteen recommendations to reduce teen pregnancy and to support parenting teens, their children, and their families. The Task Force proposed to address the problems attendant to teen pregnancy by

1. Promoting the centrality of individual and family values and responsibilities in the prevention of teen pregnancy and the support of pregnant and parenting teens;
2. Developing a supportive role for community institutions in affirming a set of values for purposeful and responsible behavior by teens and in the design and delivery of programs;
3. Emphasizing the importance of fostering higher levels of educational attainment for high-risk youths;
4. Emphasizing the importance of increasing employment opportunities for high-risk youths;
5. Suggesting mechanisms to improve a teenager's understanding of the need for and access to better health care and counseling;
6. Outlining better and more timely support services to high-risk teenagers, pregnant and parenting teens, their babies, and their families; and
7. Suggesting opportunities for developing the capacity to mobilize an all-out, long-term statewide effort involving the public and private sectors.

The final recommendation of the Task Force was the establishment of a Governor's Council on Teen Pregnancy that would follow-up on the implementation of the Task Force recommendations. The Council was appointed in December 1986 and has had monthly meetings since then.

In carrying out its purpose to reduce unplanned adolescent pregnancies in Maryland the Council shall

1. be a strong advocate in ensuring the development of a coordinated and comprehensive approach to the social, educational, and economic, health, and legal problems of adolescent pregnancy and parenthood;
2. in cooperation with appropriate state and local agencies, foster plans to enhance the coordination of all federally or state funded programs and services regarding adolescent pregnancy and parenthood in accordance with state and federal law;
3. develop a coordinated comprehensive statewide plan, including estimates of necessary public and private, state and local funding, for reducing adolescent pregnancy and improving services to at-risk, pregnant, and parenting adolescents;
4. promote interdepartmental and public and private policy, and program collaboration and coordination;
5. collect data and perform analysis on ongoing and new efforts aimed at reducing, preventing, and improving services to at-risk, pregnant, and parenting adolescents;
6. promote the development of statewide policies designed to enhance adolescent pregnancy prevention efforts and to improve services to at-risk, pregnant, and parenting adolescents;
7. monitor statewide progress toward the goal of reducing adolescent pregnancy;
8. promote and encourage wide community input, communication, and education regarding adolescent pregnancy;
9. provide advice to local public and private agencies seeking to mobilize local efforts designed to prevent adolescent pregnancies and assist adolescent parents;
10. in accordance with the statewide plan, recommend to the Governor distribution of community incentive grants concerning adolescent pregnancy from funds provided in the state budget for this purpose, giving priority to innovative projects that:
    - promote the establishment of a coordinated network of services for at-risk, pregnant, and parenting adolescents; and
    - demonstrate a high level of commitment to the project by making available nonstate funds, personnel, and facilities; and
11. report annually to the Governor and to the General Assembly on the level of expenditures and on the impact of programs and services regarding adolescent pregnancy and parenthood.

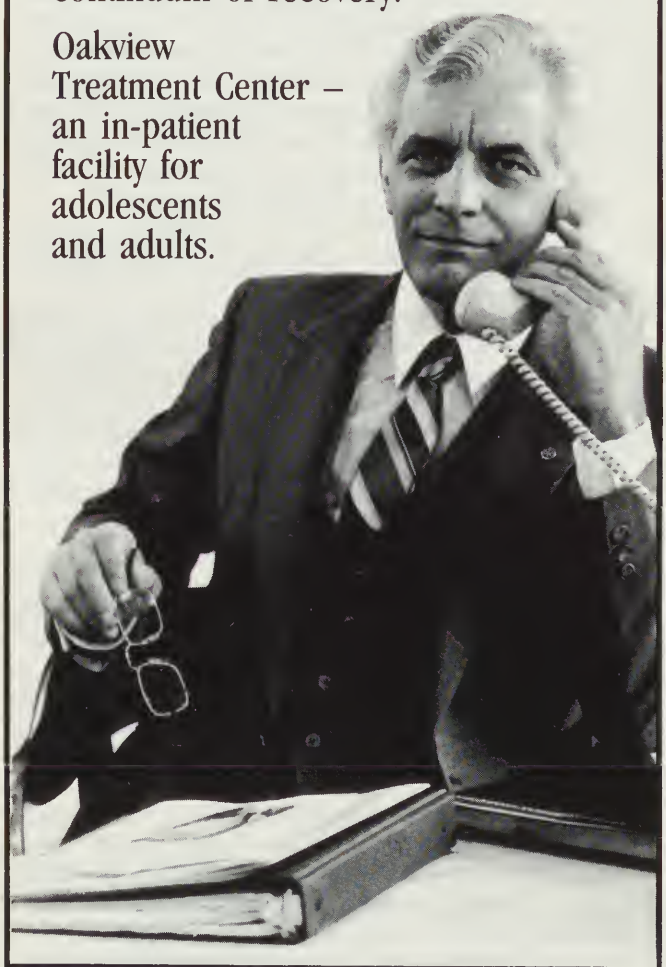
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BRIEF SUMMARY

CONTRAINDICATIONS
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Duodenal ulcer is a chronic, recurrent disease. While short-term treatment with sucralfate can result in complete healing of the ulcer, a successful course of treatment with sucralfate should not be expected to alter the post-healing frequency or severity of duodenal ulceration.

Drug Interactions: Animal studies have shown that the simultaneous administration of CARAFATE with tetracycline, phenytoin, or cimetidine will result in a statistically significant reduction in the bioavailability of these agents. This interaction appears to be nonsystemic in origin, presumably resulting from these agents being bound by CARAFATE in the gastrointestinal tract. The bioavailability of these agents may be restored simply by separating the administration of these agents from that of CARAFATE by two hours. The clinical significance of these animal studies is yet to be defined.

Carcinogenesis, Mutagenesis, Impairment of Fertility: No evidence of drug-related tumorigenicity was found in chronic oral toxicity studies of 24 months' duration conducted in mice and rats at doses up to 1 gm/kg (12 times the human dose). A reproduction study in rats at doses up to 38 times the human dose did not reveal any indication of fertility impairment. Mutagenicity studies have not been conducted.

Pregnancy: Pregnancy Category B. Teratogenicity studies have been performed in mice, rats, and rabbits at doses up to 50 times the human dose and have revealed no evidence of harm to the fetus due to sucralfate. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when sucralfate is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS
Adverse reactions to sucralfate in clinical trials were minor and only rarely led to discontinuation of the drug. In studies involving over 2,500 patients, adverse effects were reported in 121 (4.7%). Constipation was the most frequent complaint (2.2%). Other adverse effects, reported in no more than one of every 350 patients, were diarrhea, nausea, gastric discomfort, indigestion, dry mouth, rash, pruritus, back pain, dizziness, sleepiness, and vertigo.

DOSAGE AND ADMINISTRATION
The recommended adult oral dosage for duodenal ulcer is 1 gm four times a day on an empty stomach.

Antacids may be prescribed as needed for relief of pain but should not be taken within one-half hour before or after sucralfate.

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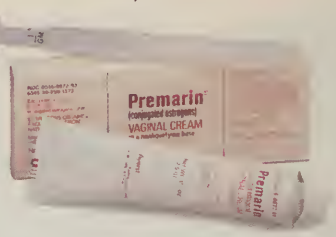
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1. ESTROGENS HAVE BEEN REPORTED TO INCREASE THE RISK OF ENDOMETRIAL CARCINOMA

Three independent, case-controlled studies have reported an increased risk of endometrial cancer in postmenopausal women exposed to exogenous estrogens for more than one year. This risk was independent of the other known risk factors for endometrial cancer. These studies are further supported by the finding that incidence rates of endometrial cancer have increased sharply since 1969 in eight different areas of the United States with population-based cancer reporting systems, an increase which may be related to the rapidly expanding use of estrogens during the last decade. The three case-controlled studies reported that the risk of endometrial cancer in estrogen users was about 4.5 to 13.9 times greater than in nonusers. The risk appears to depend on both duration of treatment and on estrogen dose. In view of these findings, when estrogens are used for the treatment of menopausal symptoms, the lowest dose that will control symptoms should be utilized and medication should be discontinued as soon as possible. When prolonged treatment is medically indicated, the patient should be reassessed on at least a semi-annual basis to determine the need for continued therapy. Although the evidence must be considered preliminary, one study suggests that cyclic administration of low doses of estrogen may carry less risk than continuous administration; it therefore appears prudent to utilize such a regimen. Close clinical surveillance of all women taking estrogens is important. In all cases of undiagnosed persistent or recurring abnormal vaginal bleeding, adequate diagnostic measures should be undertaken to rule out malignancy. There is no evidence at present that "natural" estrogens are more or less hazardous than "synthetic" estrogens at equi-estrogenic doses.

2. ESTROGENS SHOULD NOT BE USED DURING PREGNANCY

The use of female sex hormones, both estrogens and progestogens, during early pregnancy may seriously damage the offspring. It has been shown that females exposed in utero to diethylstilbestrol, a nonsteroidal estrogen, have an increased risk of developing, in later life, a form of vaginal or cervical cancer that is ordinarily extremely rare. This risk has been estimated as not greater than 4 per 1,000 exposures. Furthermore, a high percentage of such exposed women (from 30% to 90%) have been found to have vaginal adenosis, epithelial changes of the vagina and cervix. Although these changes are histologically benign, it is not known whether they are precursors of malignancy. Although similar data are not available with the use of other estrogens, it cannot be presumed they would not induce similar changes. Several reports suggest an association between intrauterine exposure to female sex hormones and congenital anomalies, including congenital heart defects and limb-reduction defects. One case-controlled study estimated a 4.7-fold increased risk of limb-reduction defects in infants exposed in utero to sex hormones (oral contraceptives, hormone withdrawal tests for pregnancy, or attempted treatment for threatened abortion). Some of these exposures were very short and involved only a few days of treatment. The data suggest that the risk of limb-reduction defects in exposed fetuses is somewhat less than 1 per 1,000. In the past, female sex hormones have been used during pregnancy in an attempt to treat threatened or habitual abortion. There is considerable evidence that estrogens are ineffective for these indications, and there is no evidence from well-controlled studies that progestogens are effective for these uses. If PREMARIN is used during pregnancy, or if the patient becomes pregnant while taking this drug, she should be apprised of the potential risks to the fetus, and the advisability of pregnancy continuation.

DESCRIPTION: PREMARIN (conjugated estrogens, USP) contains a mixture of estrogens, obtained exclusively from natural sources, blended to represent the average composition of material derived from pregnant mares' urine. It contains estrone, equilin, and 17α-dihydroequilin, together with smaller amounts of 17α-estradiol, equilenin, and 17α-dihydroequilenin as salts of their sulfate esters. Tablets are available in 0.3 mg, 0.625 mg, 0.9 mg, 1.25 mg, and 2.5 mg strengths of conjugated estrogens. Cream is available as 0.625 mg conjugated estrogens per gram.

INDICATIONS AND USAGE: PREMARIN (conjugated estrogens tablets, USP): Moderate-to-severe *vasomotor* symptoms associated with the menopause. (There is no evidence that estrogens are effective for nervous symptoms or depression without associated vasomotor symptoms and they should not be used to treat such conditions.) Osteoporosis (abnormally low bone mass). Atrophic vaginitis. Kraurosis vulvae. Female castration.

PREMARIN (conjugated estrogens) Vaginal Cream is indicated in the treatment of atrophic vaginitis and kraurosis vulvae.

PREMARIN HAS NOT BEEN SHOWN TO BE EFFECTIVE FOR ANY PURPOSE DURING PREGNANCY AND ITS USE MAY CAUSE SEVERE HARM TO THE FETUS (SEE BOXED WARNING).

Concomitant Progestin Use: The lowest effective dose appropriate for the specific indication should be utilized. Studies of the addition of a progestin for 7 or more days of a cycle of estrogen administration have reported a lowered incidence of endometrial hyperplasia. Morphological and biochemical studies of the endometrium suggest that 10 to 13 days of progestin are needed to provide maximal maturation of the endometrium and to eliminate any hyperplastic changes. Whether this will provide protection from endometrial carcinoma has not been clearly established. There are possible additional risks which may be associated with the inclusion of progestin in estrogen replacement regimens. (See PRECAUTIONS.) The choice of progestin and dosage may be important; product labeling should be reviewed to minimize possible adverse effects.

CONTRAINDICATIONS: Estrogens should not be used in women (or men) with any of the following conditions: 1. Known or suspected cancer of the breast except in appropriately selected patients being treated for metastatic disease. 2. Known or suspected estrogen-dependent neoplasia. 3. Known or suspected pregnancy (see Boxed Warning). 4. Undiagnosed abnormal genital bleeding. 5. Active thrombophlebitis or thromboembolic disorders. 6. A past history of thrombophlebitis, thrombosis, or thromboembolic disorders associated with previous estrogen use (except when used in treatment of breast or prostatic malignancy).

WARNINGS: Estrogens have been reported to increase the risk of endometrial carcinoma (see Boxed Warning). However, a recent large, case-controlled study indicated no increase in risk of breast cancer in postmenopausal women. A recent study has reported a 2- to 3-fold increase in the risk of surgically confirmed gallbladder disease in women receiving postmenopausal estrogens.

Adverse effects of oral contraceptives may be expected at the larger doses of estrogen used to treat prostatic or breast cancer or postpartum breast engorgement; it has been shown that there is an increased risk of thrombosis in men receiving estrogens for prostatic cancer and women for postpartum breast engorgement. Users of oral contraceptives have an increased risk of diseases, such as thrombophlebitis, pulmonary embolism, stroke, and myocardial infarction. Cases of retinal thrombosis, mesenteric thrombosis, and optic neuritis have been reported in oral contraceptive users. An increased risk of postsurgery thromboembolic complications has also been reported in users of oral contraceptives. If feasible, estrogen should be discontinued at least 4 weeks before surgery of the type associated with an increased risk of thromboembolism, or during periods of prolonged immobilization. Estrogens should not be used in persons with active thrombophlebitis, thromboembolic disorders, or in persons with a history of such disorders in association with estrogen use. They should be used with caution in patients with cerebral vascular or coronary artery disease. Large doses (5 mg conjugated estrogens per day), comparable to those used to treat cancer of the prostate and breast, have been shown to increase the risk of nonfatal myocardial infarction, pulmonary embolism, and thrombophlebitis. When doses of this size are used, any of the thromboembolic and thrombotic adverse effects should be considered a clear risk.

Benign hepatic adenomas should be considered in estrogen users having abdominal pain and tenderness, abdominal mass, or hypovolemic shock. Hepatocellular carcinoma has been reported in women taking estrogen-containing oral contraceptives. Increased blood pressure may occur with use of estrogens in the menopause and blood pressure should be monitored with estrogen use. A worsening of glucose tolerance has been observed in patients on estrogen-containing oral contraceptives. For this reason, diabetic patients should be carefully observed. Estrogens may lead to severe hypercalcemia in patients with breast cancer and bone metastases.

PRECAUTIONS: Physical examination and a complete medical and family history should be taken prior to the initiation of any estrogen therapy with special reference to blood pressure, breasts, abdomen, and pelvic organs, and should include a Papanicolaou smear. As a general rule, estrogen should not be prescribed for longer than one year without another physical examination being performed. Conditions influenced by fluid retention, such as asthma, epilepsy, migraine, and cardiac or renal dysfunction, require careful observation. Certain patients may develop manifestations of excessive estrogenic stimulation, such as abnormal or excessive uterine bleeding, mastodynia, etc. Prolonged administration of unopposed estrogen therapy has been reported to increase the risk of endometrial hyperplasia in some patients. Oral contraceptives appear to be associated with an increased incidence of mental depression. Patients with a history of depression should be carefully observed. Pre-existing uterine leiomyomata may increase in size during estrogen use. The pathologist should be advised of estrogen therapy when relevant specimens are submitted. If jaundice develops in any patient receiving estrogen, the medication should be discontinued while the cause is investigated. Estrogens should be used with care in patients with impaired liver function, renal insufficiency, metabolic bone diseases associated with hypercalcemia, or in young patients in whom bone growth is not yet complete. If concomitant progestin therapy is used, potential risks may include adverse effects on carbohydrate and lipid metabolism.

The following changes may be expected with larger doses of estrogen:

a. Increased sulfobromophthalein retention.

b. Increased prothrombin and factors VII, VIII, IX, and X; decreased antithrombin 3; increased norepinephrine-induced platelet aggregability.

c. Increased thyroid binding globulin (TBG) leading to increased circulating total thyroid hormone, as measured by PBI, T_4 by column, or T_4 by radioimmunoassay. Free T_3 resin uptake is decreased, reflecting the elevated TBG; free T_4 concentration is unaltered.

d. Impaired glucose tolerance.

e. Decreased pregnanediol excretion.

f. Reduced response to metyrapone test.

g. Reduced serum folate concentration.

h. Increased serum triglyceride and phospholipid concentration.

As a general principle, the administration of any drug to nursing mothers should be done only when clearly necessary since many drugs are excreted in human milk.

Long-term, continuous administration of natural and synthetic estrogens in certain animal species increases the frequency of carcinomas of the breast, cervix, vagina, and liver. However, in a recent, large case-controlled study of postmenopausal women there was no increase in risk of breast cancer with use of conjugated estrogens.

ADVERSE REACTIONS: The following have been reported with estrogenic therapy, including oral contraceptives: breakthrough bleeding, spotting, change in menstrual flow, dysmenorrhea, premenstrual-like syndrome; amenorrhea during and after treatment; increase in size of uterine fibromyomata; vaginal candidiasis, change in cervical erosion and in degree of cervical secretion; cystitis-like syndrome; tenderness, enlargement, secretion (of breasts); nausea, vomiting, abdominal cramps, bloating, cholestatic jaundice; chloasma or melasma which may persist when drug is discontinued; erythema multiforme; erythema nodosum; hemorrhagic eruption; loss of scalp hair; hirsutism; steepening of corneal curvature; intolerance to contact lenses; headache, migraine, dizziness, mental depression, chorea; increase or decrease in weight; reduced carbohydrate tolerance, aggravation of porphyria; edema; changes in libido.

ACUTE OVERDOSAGE: May cause nausea, and withdrawal bleeding may occur in females.

DOSAGE AND ADMINISTRATION:

PREMARIN® Brand of conjugated estrogens tablets, USP

1. *Given cyclically for short-term use only.* For treatment of moderate-to-severe *vasomotor* symptoms, atrophic vaginitis, or kraurosis vulvae associated with the menopause (0.3 mg to 1.25 mg or more daily). The lowest dose that will control symptoms should be chosen and medication should be discontinued as promptly as possible. Administration should be cyclic (eg, three weeks on and one week off). Attempts to discontinue or taper medication should be made at three- to six-month intervals.

2. *Given cyclically:* Osteoporosis. Female castration. Osteoporosis —0.625 mg daily. Administration should be cyclic (eg, three weeks on and one week off). Female castration—1.25 mg daily, cyclically. Adjust upward or downward according to response of the patient. For maintenance, adjust dosage to lowest level that will provide effective control.

Patients with an intact uterus should be monitored for signs of endometrial cancer and appropriate measures taken to rule out malignancy in the event of persistent or recurring abnormal vaginal bleeding.

PREMARIN® Brand of conjugated estrogens Vaginal Cream

Given cyclically for short-term use only. For treatment of atrophic vaginitis or kraurosis vulvae.

The lowest dose that will control symptoms should be chosen and medication should be discontinued as promptly as possible.

Administration should be cyclic (eg, three weeks on and one week off).

Attempts to discontinue or taper medication should be made at three- to six-month intervals.

Usual dosage range: 2 g to 4 g daily, intravaginally, depending on the severity of the condition.

Treated patients with an intact uterus should be monitored closely for signs of endometrial cancer and appropriate diagnostic measures should be taken to rule out malignancy in the event of persistent or recurring abnormal vaginal bleeding.

References:

1. Lindsay R, Hart DM, Clark DM: The minimum effective dose of estrogen for prevention of postmenopausal bone loss. *Obstet Gynecol* 1984;63:759-763 **2.** Studd JWW, Thom MH, Paterson MEL, et al: The prevention and treatment of endometrial pathology in postmenopausal women receiving exogenous estrogens, in Pasetto N, Paoletti R, Ambrus JL (eds): *The Menopause and Postmenopause*. Lancaster, England, MTP Press Ltd, 1980, chap 13

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Ayerst®
AYERST LABORATORIES
New York, NY 10017

Motrin® 800 mg TABLETS
ibuprofen



Extra strength
Convenience
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J-6138 January 1986

News from DISTA about a new dosage form of cephalexin

ANNOUNCING NEW

Keflet®
TABLETS
cephalexin

All the advantages of cephalexin in a convenient tablet form

- Backed by over 15 years of clinical experience
- Smaller tablet is specially shaped and coated for easier swallowing
- May enhance patient compliance, particularly among the elderly
- Tablet dosage form may be appreciated by patients of all ages

NEW Keflet Tablets are available as:

250-mg Tablets



500-mg Tablets

Keflet is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-sensitive patients.

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Brief Summary. Consult the package literature for prescribing information. Indications and Usage: Keflet® Tablets (cephalexin, Dista) are indicated for the treatment of the following infections when caused by susceptible strains of the designated microorganisms:

Respiratory tract infections caused by *Streptococcus pneumoniae* and group A β-hemolytic streptococci (Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. Keflet is generally effective in the eradication of streptococci from the nasopharynx; however, substantial data establishing the efficacy of Keflet in the subsequent prevention of rheumatic fever are not available at present.)

Otitis media due to *S pneumoniae, Haemophilus influenzae*, staphylococci, streptococci, and *Neisseria catarrhalis*

Skin and skin structure infections caused by staphylococci and/or streptococci

Bone infections caused by staphylococci and/or *Proteus mirabilis*

Genitourinary tract infections, including acute prostatitis, caused by *Escherichia coli, P mirabilis*, and *Klebsiella* sp.

Note—Culture and susceptibility tests should be initiated prior to and during therapy. Renal function studies should be performed when indicated.

Contraindication: Keflet is contraindicated in patients with known allergy to the cephalosporin group of antibiotics.

Warnings: BEFORE CEPHALEXIN THERAPY IS INSTITUTED, CAREFUL INQUIRY SHOULD BE MADE CONCERNING PREVIOUS HYPERSENSITIVITY REACTIONS TO CEPHALOSPORINS AND PENICILLIN. CEPHALOSPORIN C DERIVATIVES SHOULD BE GIVEN CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS.

SERIOUS ACUTE HYPERSENSITIVITY REACTIONS MAY REQUIRE EPINEPHRINE AND OTHER EMERGENCY MEASURES.

There is some clinical and laboratory evidence of partial cross-allergenicity of the penicillins and the cephalosporins. Patients have been reported to have had severe reactions (including anaphylaxis) to both drugs.

Any patient who has demonstrated some form of allergy, particularly to drugs, should receive antibiotics cautiously. No exception should be made with regard to Keflet.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics (including macrolides, semisynthetic penicillins, and cephalosporins); therefore, it is important to consider its diagnosis in patients who develop diarrhea in association with the use of antibiotics. Such colitis may range in severity from mild to life-threatening.

Treatment with broad-spectrum antibiotics alters the normal flora of the colon and may permit overgrowth of clostridia. Studies indicate that a toxin produced by *Clostridium difficile* is one primary cause of antibiotic-associated colitis.

Mild cases of pseudomembranous colitis usually respond to drug discontinuance alone. In moderate to severe cases, management should include sigmoidoscopy, appropriate bacteriologic studies, and fluid, electrolyte, and protein supplementation. When the colitis does not improve after the drug has been discontinued, or when it is severe, oral vancomycin is the drug of choice for antibiotic-associated pseudomembranous colitis produced by *C difficile*. Other causes of colitis should be ruled out.

Usage in Pregnancy—Safety of this product for use during pregnancy has not been established.

Precautions: *General*—Patients should be followed carefully so that any side effects or unusual manifestations of drug idiosyncrasy may be detected. If an allergic reaction to Keflet occurs, the drug should be discontinued and the patient treated with the usual agents (eg, epinephrine or other pressor amines, antihistamines, or corticosteroids).

Prolonged use of Keflet may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Positive direct Coombs' tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coombs' testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs' test may be due to the drug.

Keflet should be administered with caution in the presence of markedly impaired renal function. Under such conditions, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended.

Indicated surgical procedures should be performed in conjunction with antibiotic therapy.

As a result of administration of Keflet, a false-positive reaction for glucose in the urine may occur. This has been observed with Benedict's and Fehling's solutions and also with Clinitest® tablets but not with Tes-Tape® (Glucose Enzymatic Test Strip, USP, Lilly).

Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.

Usage in Pregnancy—Pregnancy Category B—The daily oral administration of cephalexin to rats in doses of 250 or 500 mg/kg prior to and during pregnancy, or to rats and mice during the period of organogenesis only, had no adverse effect on fertility, fetal viability, fetal weight, or litter size. Note that the safety of cephalexin during pregnancy in humans has not been established.

Cephalexin showed no enhanced toxicity in weanling and newborn rats as compared with adult animals. Nevertheless, because the studies in humans cannot rule out the possibility of harm, Keflet should be used during pregnancy only if clearly needed.

Nursing Mothers—The excretion of cephalexin in the milk increased up to 4 hours after a 500-mg dose; the drug reached a maximum level of 4 μg/mL, then decreased gradually, and had disappeared 8 hours after administration. Caution should be exercised when Keflet is administered to a nursing woman.

Adverse Reactions: *Gastrointestinal*—Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment. Nausea and vomiting have been reported rarely. The most frequent side effect has been diarrhea. It was very rarely severe enough to warrant cessation of therapy. Dyspepsia and abdominal pain have also occurred. As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.

Hypersensitivity—Allergic reactions in the form of rash, urticaria, angioedema, and, rarely, erythema multiforme, Stevens-Johnson Syndrome, or toxic epidermal necrolysis have been observed. These reactions usually subsided upon discontinuation of the drug. Anaphylaxis has also been reported.

Other reactions have included genital and anal pruritus, genital moniliasis, vaginitis and vaginal discharge, dizziness, fatigue, and headache. Reversible interstitial nephritis has been reported rarely. Eosinophilia, neutropenia, thrombocytopenia, and slight elevations in SGOT and SGPT have been reported.

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Additional information available to the profession on request from

DISTA

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Indianapolis, Indiana 46285
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Carolina, Puerto Rico 00630



ZOVIRAX®
(acyclovir)
CAPSULES

Prevent genital herpes recurrences month after month with daily therapy.

(In controlled studies, recurrences were totally prevented for 4 to 6 months in up to 75% of patients.)

Please see last page of this advertisement for brief summary of prescribing information.

ZOVIRAX® (acyclovir) CAPSULES

Help free your patients from recurrences.

Daily therapy

Coping with genital herpes is rarely easy. For some, the worst part is the pain and discomfort of frequent attacks—month after month, year after year. For others, the emotional burden presents a more difficult problem, leading to social isolation, anxiety, and diminished self-esteem.

Prevent or reduce recurrences

Although your patients have to live with herpes, they shouldn't have to suffer. Daily therapy with ZOVIRAX CAPSULES can help free them from the cycle of recurrent genital herpes. For many, one capsule three times a day can suppress recurrences completely while on therapy.

Generally well tolerated

Daily therapy with ZOVIRAX CAPSULES is generally well tolerated. The most frequent adverse reactions reported during clinical trials were headache, diarrhea, nausea/vomiting, vertigo, and arthralgia.

The physical and emotional difficulties posed by genital herpes are unique for each patient. The frequency and severity of recurrent episodes, as well as the emotional impact of the disease, should be considered when selecting daily therapy with ZOVIRAX CAPSULES.

Please see brief summary of prescribing information on next page.



Prevent recurrences month after month*

ZOVIRAX® (acyclovir) CAPSULES

Brief Summary

INDICATIONS AND USAGE: Zovirax Capsules are indicated for the treatment of initial episodes and the management of recurrent episodes of genital herpes in certain patients.

The severity of disease is variable depending upon the immune status of the patient, the frequency and duration of episodes, and the degree of cutaneous or systemic involvement. These factors should determine patient management, which may include symptomatic support and counseling only, or the institution of specific therapy. The physical, emotional and psycho-social difficulties posed by herpes infections as well as the degree of debilitation, particularly in immunocompromised patients, are unique for each patient, and the physician should determine therapeutic alternatives based on his or her understanding of the individual patient's needs. Thus Zovirax Capsules are not appropriate in treating all genital herpes infections. The following guidelines may be useful in weighing the benefit/risk considerations in specific disease categories:

First Episodes (primary and nonprimary infections — commonly known as initial genital herpes):

Double-blind, placebo-controlled studies have demonstrated that orally administered Zovirax significantly reduced the duration of acute infection (detection of virus in lesions by tissue culture) and lesion healing. The duration of pain and new lesion formation was decreased in some patient groups. The promptness of initiation of therapy and/or the patient's prior exposure to Herpes simplex virus may influence the degree of benefit from therapy. Patients with mild disease may derive less benefit than those with more severe episodes. In patients with extremely severe episodes, in which prostration, central nervous system involvement, urinary retention or inability to take oral medication require hospitalization and more aggressive management, therapy may be best initiated with intravenous Zovirax.

Recurrent Episodes:

Double-blind, placebo-controlled studies in patients with frequent recurrences (6 or more episodes per year) have shown that Zovirax Capsules given for 4 to 6 months prevented or reduced the frequency and/or severity of recurrences in greater than 95% of patients. Clinical recurrences were prevented in 40 to 75% of patients. Some patients experienced increased severity of the first episode following cessation of therapy; the severity of subsequent episodes and the effect on the natural history of the disease are still under study.

The safety and efficacy of orally administered acyclovir in the suppression of frequent episodes of genital herpes have been established only for up to 6 months. Chronic suppressive therapy is most appropriate when, in the judgement of the physician, the benefits of such a regimen outweigh known or potential adverse effects. In general, Zovirax Capsules should not be used for the suppression of recurrent disease in mildly affected patients. Unanswered questions concerning the human relevance of *in vitro* mutagenicity studies and reproductive toxicity studies in animals given very high doses of acyclovir for short periods (see Carcinogenesis, Mutagenesis, Impairment of Fertility) should be borne in mind when designing long-term management for individual patients. Discussion of these issues with patients will provide them the opportunity to weigh the potential for toxicity against the severity of their disease. Thus, this regimen should be considered only for appropriate patients and only for six months until the results of ongoing studies allow a more precise evaluation of the benefit/risk assessment of prolonged therapy.

Limited studies have shown that there are certain patients for whom intermittent short-term treatment of recurrent episodes is effective. This approach may be more appropriate than a suppressive regimen in patients with infrequent recurrences.

Immunocompromised patients with recurrent herpes infections can be treated with either intermittent or chronic suppressive therapy. Clinically significant resistance, although rare, is more likely to be seen with prolonged or repeated therapy in severely immunocompromised patients with active lesions.

CONTRAINDICATIONS: Zovirax Capsules are contraindicated for patients who develop hypersensitivity or intolerance to the components of the formulation.

WARNINGS: Zovirax Capsules are intended for oral ingestion only.

PRECAUTIONS: General: Zovirax has caused decreased spermatogenesis at high doses in some animals and mutagenesis in some acute studies at high concentrations of drug (see PRECAUTIONS — Carcinogenesis, Mutagenesis, Impairment of Fertility). The recommended dosage and length of treatment should not be exceeded (see DOSAGE AND ADMINISTRATION).

Exposure of Herpes simplex isolates to acyclovir *in vitro* can lead to the emergence of less sensitive viruses. The possibility of the appearance of less sensitive viruses in man must be borne in mind when treating patients. The relationship between the *in vitro* sensitivity of Herpes simplex virus to acyclovir and clinical response to therapy has yet to be established.

Because of the possibility that less sensitive virus may be selected in patients who are receiving acyclovir, all patients should be advised to take particular care to avoid potential transmission of virus if active lesions are present while they are on therapy. In severely immunocompromised patients, the physician should be aware that prolonged or repeated courses of acyclovir may result in selection of resistant viruses which may not fully respond to continued acyclovir therapy.

Drug Interactions: Co-administration of probenecid with intravenous acyclovir has been shown to increase the mean half-life and the area under the concentration-time curve. Urinary excretion and renal clearance were correspondingly reduced.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Acyclovir was tested in lifetime bioassays in rats and mice at single daily doses of 50, 150 and 450 mg/kg given by gavage. There was no statistically significant difference in the incidence of tumors between treated and control animals, nor did acyclovir shorten the latency of tumors. In 2 *in vitro* cell transformation assays, used to provide preliminary assessment of potential oncogenicity in advance of these more definitive life-time bioassays in rodents, conflicting results were obtained. Acyclovir was positive at the highest dose used in one system and the resulting morphologically transformed cells formed tumors when inoculated into immunosuppressed, syngeneic, weanling mice. Acyclovir was negative in another transformation system considered less sensitive.

In acute studies, there was an increase, not statistically significant, in the incidence of chromosomal damage at maximum tolerated parenteral doses of 100 mg/kg acyclovir in rats but not Chinese hamsters; higher doses of 500 and 1000 mg/kg were clastogenic in Chinese hamsters. In addition, no activity was found after 5 days dosing in a dominant lethal study in mice. In 6 of 11 microbial and mammalian cell assays, no evidence of mutagenicity was observed. At 3 loci in a Chinese hamster ovary cell line, the results were inconclusive. In 2 mammalian cell assays (human lymphocytes and L5178Y mouse lymphoma cells *in vitro*), positive responses for mutagenicity and chromosomal damage occurred, but only at concentrations at least 400 times the acyclovir plasma levels achieved in man.

Acyclovir has not been shown to impair fertility or reproduction in mice (450 mg/kg/day, p.o.) or in rats (25 mg/kg/day, s.c.). At 50 mg/kg/day s.c. in the rat, there was a statistically significant increase in post-implantation loss, but no concomitant decrease in litter size. In female rabbits treated subcutaneously with acyclovir subsequent to mating, there was a statistically significant decrease in implantation efficiency but no concomitant decrease in litter size at a dose of 50 mg/kg/day. No effect upon implantation efficiency was observed when the same dose was administered intravenously. In a rat peri- and postnatal study at 50 mg/kg/day s.c., there was a statistically significant decrease in the group mean numbers of corpora lutea, total implantation sites and live fetuses in the F_1 generation. Although not statistically significant, there was also a dose related decrease in group mean numbers of live fetuses and implantation sites at 12.5 mg/kg/day and 25 mg/kg/day, s.c. The intravenous administration of 100 mg/kg/day, a dose known to cause obstructive nephropathy in rabbits, caused a significant increase in fetal resorptions and a corresponding decrease in litter size. However, at a maximum tolerated intravenous dose of 50 mg/kg/day in rabbits, there were no drug-related reproductive effects.

Intraperitoneal doses of 320 or 80 mg/kg/day acyclovir given to rats for 1 and 6 months, respectively, caused testicular atrophy. Testicular atrophy was persistent through the 4-week postdose recovery phase after 320 mg/kg/day; some evidence of recovery of sperm production was evident 30 days postdose. Intravenous doses of 100 and 200 mg/kg/day acyclovir given to dogs for 31 days caused aspermatogenesis. Testicles were normal in dogs given 50 mg/kg/day, i.v. for one month.

Pregnancy: ***Teratogenic Effects:*** Pregnancy Category C. Acyclovir was not teratogenic in the mouse (450 mg/kg/day, p.o.), rat (50 mg/kg/day, s.c.) or rabbit (50 mg/kg/day, s.c. and i.v.). There are no adequate and well-controlled studies in pregnant women. Acyclovir should not be used during pregnancy unless the potential benefit justifies the potential risk to the fetus. Although acyclovir was not teratogenic in animal studies, the drug's potential for causing chromosome breaks at high concentration should be taken into consideration in making this determination.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when Zovirax is administered to a nursing woman. In nursing mothers, consideration should be given to not using acyclovir treatment or discontinuing breastfeeding.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS — Short-Term Administration: The most frequent adverse reactions reported during clinical trials were nausea and/or vomiting in 8 of 298 patient treatments (2.7%) and headache in 2 of 298 (0.6%). Less frequent adverse reactions, each of which occurred in 1 of 298 patient treatments (0.3%), included diarrhea, dizziness, anorexia, fatigue, edema, skin rash, leg pain, inguinal adenopathy, medication taste and sore throat.

Long-Term Administration: The most frequent adverse reactions reported in studies of daily therapy for 3 to 6 months were headache in 33 of 251 patients (13.1%), diarrhea in 22 of 251 (8.8%), nausea and/or vomiting in 20 of 251 (8.0%), vertigo in 9 of 251 (3.6%), and arthralgia in 9 of 251 (3.6%). Less frequent adverse reactions, each of which occurred in less than 3% of the 251 patients (see number of patients in parentheses), included skin rash (7), insomnia (4), fatigue (7), fever (4), palpitations (1), sore throat (2), superficial thrombophlebitis (1), muscle cramps (2), pars planitis (1), menstrual abnormality (4), acne (3), lymphadenopathy (2), irritability (1), accelerated hair loss (1), and depression (1).

DOSAGE AND ADMINISTRATION: Treatment of initial genital herpes: One 200 mg capsule every 4 hours, while awake, for a total of 5 capsules daily for 10 days (total 50 capsules).

Chronic suppressive therapy for recurrent disease: One 200 mg capsule 3 times daily for up to 6 months. Some patients may require more drug, up to one 200 mg capsule 5 times daily for up to 6 months.

Intermittent Therapy: One 200 mg capsule every 4 hours, while awake, for a total of 5 capsules daily for 5 days (total 25 capsules). Therapy should be initiated at the earliest sign or symptom (prodrome) of recurrence.

Patients With Acute or Chronic Renal Impairment: One 200 mg capsule every 12 hours is recommended for patients with creatinine clearance $\leq$10 ml/min/1.73/m^2.

HOW SUPPLIED: Zovirax Capsules (blue, opaque) containing 200 mg acyclovir and printed with "Wellcome ZOVIRAX 200" - Bottles of 100 (NDC-0081-0991-55) and unit dose pack of 100 (NDC-0081-0991-56).

Store at 15°-30°C (59°-86°F) and protect from light.

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CHILD AND ADOLESCENT PSYCHIATRY DIVISION

Adolescent Growth and Development

JOANNE E. STEANE MD and FELIX P. HEALD MD

Unique physical and emotional changes take place during adolescence, and there is concern that superimposing the stress of pregnancy on the growing and developing female adversely affects the mother, the infant, and society. The impact of adolescent growth and development on obstetrical outcome is still under review.

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Adolescence is a period that is unique because of the physical and emotional changes taking place. During a brief but varying span of years, the dependent child transforms into an independent adult. This transformation has both physical and psychological components. Major outward physical changes include a linear growth spurt resulting in attainment of adult height, alteration of body composition and habitus, and development of mature sexual characteristics. Maturation of the reproductive system results in the ability to conceive and bear children. Psychosocially, there is adjustment to and acceptance of this new body, cognitive maturation, identity development, and restructuring of relationships, making the adolescent years an exciting, challenging, and sometimes difficult phase of life.

The uncertainties of this period are stressful to the individual, family, and society. Thus, the addition of further stresses such as drug abuse, delinquent behavior, and sexual activity disrupt an orderly sequence of development. One of these behaviors that has resulted in a great deal of discussion, research, and program development is the superimposition of pregnancy on the growing and developing female adolescent. The concern is that the additional demands a pregnancy places on the individual are difficult to meet, and the adolescent mother, infant, and society are adversely affected.

Physical Development

The Adolescent Growth Spurt The period of adolescence, unlike any other time of life, is marked by growth acceleration, followed by deceleration with ultimate attainment of adult height. The time of maximal growth is termed "peak height velocity." In females, the mean age of peak height velocity is 12.14 ± 0.14 years, with a standard deviation of 0.88 years.[1] Thus, the maximal growth rate, on average, occurs between ages 10 and 14, and growth can occur after peak height velocity has been obtained. In one study, the median age of attainment of adult height was 17.3 years (range, 15.8 years to 21.2 years), with growth continuing three to seven years after menarche.[2] The overall amount of growth during the adolescent growth spurt is impressive and accounts for 20 to 25 percent of final adult height.

The timing of the growth spurt results in differences in height among females of the same chronologic age. Thus, girls who experience their spurt at an earlier age than their peers will be taller, but their growth also slows down earlier, and the final height may not be different.[3]

Body Composition and Habitus In parallel with the spurt in height, there is a weight spurt that peaks six months after peak height velocity. In females, this is caused by an increase in lean body mass and fat mass. In addition, there is growth of the lengths and widths of bones and internal organs. The pubertal weight gain accounts for half the final ideal adult body weight.[4]

Clearly related to the occurrence of peak height and weight velocity during puberty are nutritional changes. There is a marked increase in total caloric intake with the accompanying nutrients such as protein, fat, minerals, and vitamins. Wait and Roberts have clearly shown the relationship between rapid growth during puberty and a marked increase in nutrient intake.[5] Further, Heald has shown that unusual sensitivity of the adolescent to caloric deprivation during periods of rapid growth when compared to adults.[6]

Sexual Maturation The earliest and most obvious signs of early adolescence are development of secondary sexual characteristics. Changes in breast size and shape as well as pubic hair distribution occur on a continuum in a predictable pattern, although its timing varies among individuals. These changes, as with height growth and body composition, are controlled by gonadal hormones (especially estradiol and progesterone) and adrenal androgens.

A series of sexual maturation standards for breast and pubic hair development have been derived to identify stage of maturation.[7] Breast budding, the first stage, occurs at an average age of 11.2 years (range 9.0 to 13.4 years). The average length of time for attainment of Stage V (or adult) pattern of breast and pubic hair development is 4 years (range 1.5 to 8.0 years) from initiation.

Menarche A hallmark of "becoming a woman" is the start of menstruation. This milestone occurs after the peak height velocity has been attained and during sexual maturity Stage III or IV. The average age of menarche is 13 years (range 10–16.5 years).[7]

Ovulation and thus the capacity to conceive is not concomitant with menarche. In the first year following menarche, 55.7 percent of cycles are anovulatory. Regular monthly ovulation does not occur until approximately seven years after menarche, or age 19 to 20.[8]

Psychologic Development

The developmental phases of adolescence has been divided traditionally into three stages: early (ages 12 to 14 years or junior high school years); middle (ages 15 to 17 years or high school), and late (age 18 to 21 years, college or early employment).[4] These ages are approximate and allow for individual and cultural variation. During each stage obvious "tasks" need to be met and completed before moving on to the next phase.

Early Adolescence The distinctive characteristic of early adolescence is that of an independence-dependence struggle, in which the teen is attempting to distance herself from her parents and find new attachments. Peer involvement is mainly with same sex friends. There is concern over the bodily changes, much comparison with others, and wondering if "I'm normal." Identity formation is marked by need for privacy, identification of one's values, and exploration of sexual feelings, usually in groups or by "flirting." The intellectual demands of school are heightened by increased expectations and work load. The adolescent begins to think abstractly and to reason about future ramifications of actions. This period is still marked by egocentricity and an unrealistic feeling of immunity to danger.

Middle Adolescence At this phase, the independence-dependence struggle is more of a battleground with peer values at a premium when compared to parental values. As a means of aiding the process of emotional emancipation from parents, peer involvement is paramount. This leads to an increased interest in heterosexual relationships and heightened awareness of sexual feelings. The adolescent becomes more comfortable with body changes that have occurred but still is overconcerned with her appearance and wanting to fit in. Identity development continues along with heightened intellectual ability and curiosity.

Late Adolescence The final phase of adolescent development is marked by resolution of conflicts and acceptance of adult responsibilities. The independence-dependence struggle is more comfortable, and a balance is struck between being a separate entity and concern and involvement with parents and peers. The adolescent girl has become comfortable with her body. Peers become less important as the individual becomes comfortable with her own identity. She becomes interested in a single heterosexual relationship, adding emotional intimacy to a sexual relationship; marriage and children are an interest. Finally, identity formation is complete; the late adolescent can see herself realistically and can assume responsibility for her actions.

Pregnancy and Its Physical Effects

Much attention and investigation have been focused on the medical aspects of pregnancy during adolescence.

Adolescent Pregnancy Early studies (in the 1960s and early 1970s) revealed several alarming trends in pregnancies carried by adolescents. The conclusions were often in conflict and suffered from nonuniform labeling of adolescence. In addition, confounding variables such as race, socioeconomic status, parity, nutrition, and timing of prenatal care were not controlled. In general there were several problems associated with these pregnancies. Maternal risks, when compared to adults or older adolescents, included an increased rate of toxemia,[9–13] contracted pelvis,[9] anemia,[10] prolonged labor,[11] and fetopelvic distortion.[11,13] Adverse neonatal outcomes were cited: prematurity,[9,11] immaturity and low birth weight,[9] and perinatal loss.[9,11]

Because of concern that these effects could relate to the biologic immaturity of the mother, an effort was made to develop a more accurate measure than simply age, reflecting that development is not uniform between individuals and two girls of the same chronologic age can be in very different stages of growth and development. Thus, the concept of gynecologic age (the chronologic age minus menarchal age) was used to study adolescent pregnancy.[14] This study showed that only low birth weight of infants was associated with a low gynecologic age.[14] This confirmed earlier work[15] that less mature adolescents (24 months postmenarche) had almost double the risk of having a low birth weight infant. However, a recent study showed no difference in pregnancy complications and outcome in younger *v* older gynecologic aged patients.[16]

The final answer about the adverse effect of adolescent pregnancy is not known. Many authors agree with the point made in a recent study that "it appeared that girls who were physiologically mature enough to conceive did not have adverse pregnancy risks associated with their incomplete body growth."[17] This brings us full circle to one of the earliest published studies of adolescent pregnancy, that of Harris in 1922.[18] His conclusion was, from a purely obstetric point of view, that the ages of 12 to 16 years were optimum for first pregnancy.

Pregnancy in Adolescence The only aspect studied of the effect of adolescent pregnancy on growth and development is that of height growth. It had long been speculated whether the increased requirements for pregnancy would adversely affect any remaining height growth. Two recent studies looked at this issue. One compared teenagers' height at a first and second pregnancy and found that there was a small but measurable increase in stature that was consistent with postmen-

archal growth.[19] The second study again compared a first and second pregnancy in the same teenagers (<16 years old at a first delivery) and found that the girls were shorter at the first pregnancy when compared with the second, with average growth of 0.37 cm/year.[17] Thus, pregnancy is not affecting height growth. Our current work does not agree with these findings. Initial results reveal that patients followed longitudinally throughout the pregnancy and postpartum are not growing in height, even having a gynecologic age of one.

Again the answer is unknown. One author argues that by the time an adolescent can become pregnant, that is, post menarchal, at any chronologic age, the physical growth and development changes still to occur are minimal. Thus, "from the purely biologic standpoint the teenager should be able to satisfactorily carry her fetus to term, under circumstances equivalent to those of her older sister" and "whatever risks associated with teenage pregnancy are more likely to be in the realm of the psychosocial and environmental spheres."[20]

Pregnancy and Its Psychosocial Effects

With initial biologic consideration of adolescent pregnancy much less of a concern than earlier expected, the psychosocial consequences are more in the forefront of current interest. As with physical development, these issues can be subdivided in two ways: the developmental reasons for becoming a pregnant adolescent; and the effects of pregnancy on psychosocial development. The following discussion is but a brief review of this topic; readers are referred to two sources from which the information is abstracted.[21,22]

Why Adolescent Pregnancy Several reasons cited as to why adolescent females become pregnant are related to their stage of development. Most obvious is that they have not acquired the ability to accept that current behavior will have future consequences. Thus, immediate sexual gratification is paramount, without concern for a resulting pregnancy. In addition, because they are unable to plan for the future, they do not have contraceptives available or do not have the experience to use them correctly. They also lack knowledge of or are misinformed about human anatomy and reproduction. There are many misconceptions: if sex occurs occasionally, instead of regularly, one cannot become pregnant; the safest time for intercourse is between the menstrual periods; one cannot get pregnant if the partner uses withdrawal; "I haven't got pregnant yet" (with unprotected intercourse) and so the female is infertile; and one cannot conceive without orgasm. These errors in knowledge, coupled with inadequate future concern, are thought to be underlying reasons for the continued high pregnancy rates of teenagers contrasted with an overall declining birth rate.

Pregnancy's Effect on Development There is no doubt that a pregnancy in adolescence makes developmental tasks much more difficult and potentially impossible to complete. As detailed earlier, the tasks include adjusting and accepting independence, body image, stable heterosexual relationship, identity formation, and intellectual development resulting in a career. As can be expected, all these tasks are affected if full personality growth has not occurred, and there can be a failure to fulfill these functions of adolescence.

A young pregnant adolescent is usually unable to support herself and her child. Therefore, before she is able to be fully independent, she is utterly dependent on family or on agencies for monetary, living, and child-care support. She often finds herself unable to leave these supports and so prolongs the period of dependency.

Changes in appearance during pregnancy may only heighten the adolescent's concern about her body. The obvious physical change of increased girth does not allow hiding the condition. Exaggeration of fat deposition in the lower half of the body may be lifelong, as may be abdominal or upper thigh striae and pigmentation changes. Increased fat, sweat, and sebaceous gland production may add to self-consciousness. Some young teenagers deny pregnancy as a coping mechanism to negate the physical changes they don't want to accept.

Some adolescent pregnancies result in marriages, but the majority do not. These marriages have a large probability of dissolution. Thus, a notion of a teenager that becoming pregnant will "keep her man" is not borne out in the literature, and a stable heterosexual relationship does not occur.

Many teenagers who become pregnant have very poor self-image and self-esteem. There are feelings of worthlessness, helplessness, and emptiness. The baby is a way to improve this, to "have someone to love me." Their identity is not yet complete, and they are assuming responsibility for the forming of another's identity without the necessary skills.

The last aspect of adolescent psychosocial development is that of intellectual broadening and career attainment. Again, teenagers who are pregnant and subsequently mothers are at risk of not completing this task. The majority of teenagers experiencing a pregnancy prior to the completion of high school will drop out of school. The earlier an adolescent leaves school, the less the chance of completing an education. Without an adequate education and thus possibilities to escape a vicious cycle, jobs are limited.

Conclusion

The interplay between adolescent growth and development during pregnancy has been the subject of much research. Clearly emerging is the concept that pregnancy during late adolescence is not a concern. However, the occurrence of pregnancy in early to mid-adolescence clearly has adverse psychosocial consequences. The obstetrical outcome (biological consequence) during this period is still uncertain and requires more carefully designed research.

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Risk Factors for Early Sexual Activity and Early Unplanned Pregnancy

SUSAN PANZARINE PhD and JOHN SANTELLI MD

Knowledge of the biological and psychosocial antecedents of early sexual activity and its immediate consequence, adolescent pregnancy, is crucial for the clinician to identify high-risk individuals. Risk factors for early initiation of sexual activity include the transition to puberty, peer and sibling influences, poverty, family structure and function, poor school achievement, other problem behaviors, and inadequate contraceptive use. There are implications for the primary care physician with respect to the assessment and treatment of teens at risk.

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The major emphasis of recent medical literature on adolescent sexuality and pregnancy has been on consequences rather than antecedents of early sexual activity. Teenage pregnancy has been well described along with the important social consequences for the young mother: school failure and dropout, economic dependency, unwed motherhood, and the failure of young marriages.[1] Less emphasis has been placed on the risk factors that may explain this early transition to sexual activity and subsequent pregnancy.

Social conditions, particularly poverty, have long been recognized as important antecedents of teenage pregnancy. Recent research has begun to more clearly identify biological and psychosocial factors that contribute to the transition to sexual activity. Such research has helped set this array of social, biological, and psychological factors into a coherent framework. One must bear in mind that antecedents to early unplanned pregnancy may differ from precursors to the initiation of sexual activity. The nature of the adolescent's poor use of contraceptives places the young sexually active teen at high risk for a subsequent pregnancy. Therefore, an understanding of the risk factors for early sexual activity will alert the clinician to those teens at risk of an unplanned pregnancy (Table). Unfortunately, too often the first encounter of the adolescent female and the primary care physician is the arranging for a pregnancy test.

Demographics

Over a million American teenagers will become pregnant this year. Over half of these will result in a live birth, most of these unplanned and many unwanted. In Maryland, over 8,000 births occur to teenage mothers each year. In Baltimore City, almost 25 per cent of live births every year are to teenagers.[2]

A series of national surveys conducted by Zelnick and Kantner at Johns Hopkins in the 1970s documented clear increases in the percentage of 15 to 19-year-old women reporting intercourse before marriage, from 30 percent in 1971 to 50 percent in 1979.[3] Along with this there was a decline in the median age for the first intercourse for women from approximately age 19 to age 17. The median age for first intercourse for adolescent men was one year earlier. Sexual activity also began earlier for black women than for white women. Differences for black and white men were small. Not surprisingly, the reported pregnancy rate for unmarried adolescents doubled from 1971 to 1979. The most recent national survey of adolescent sexuality using data from 1982 suggests a leveling off of this increase in teen sexual activity.[4,5] However, this may not be true for the youngest teenagers; birth rates have been rising in this age group for the past several years.[6]

Puberty and Peers

While adolescent "hormones" have more often been

Table. Risk Factors for Early Adolescent Sexual Activity and Pregnancy

Demographic Factors
Temporal trends
Age
Race
Gender/sex
Nationality
Social class
Pubertal Factors
Physical maturity
androgen related
estrogen related
Hormonal levels
free testosterone index
Peer Influences
Best friend
same sex
opposite sex
Cohort-related
Family and Environmental Factors
Poverty and social class
Single-parent families
Large numbers of siblings
Pregnant adolescent sister
Poor school achievement
Other Problem Behaviors
Smoking
Drug use
Delinquency
Contraceptive Use

used as a term of derision in explaining adolescent behavior and misbehavior, an emerging body of solid scientific knowledge has established a clear relationship between endogenous hormones and sexual interest and behavior. Physical development at puberty has been described as an excellent bioassay for endogenous levels of androgens and estrogen. Both physical development as measured by Tanner's rating scale and circulating levels of endogenous hormones correlate with sexual motivation. The close relationship between pubertal development, the pubertal hormones controlling development, and the psychosocial interpretation of physical maturity has sparked a debate over the relative importance of these in relationship to emerging teen sexuality.

Udry (a sociologist) and his colleagues at Chapel Hill have extensively examined the social, physical, and hormonal factors that influence adolescent sexuality and have tried to answer this question of social pressure *v* hormonal drives.[7-10] Their results suggest that for men, levels of free testosterone and level of physical development were the prime motivators for the initiation of sexual activity.[7] Social influences, particularly the sexual behavior of best friends, were also important although less so than biological effects.[7,8] In attempting to clarify the relative importance of physical development *v* hormonal activity they used a multiple regression model to examine the major hormones that increase at puberty including dehydroepiandrosterone, dehydroepiandrosterone-sulfate, luteinizing hormone, testosterone, androstenedione, and testosterone binding globulin, plus several measures of pubertal development in a group of eight to tenth grade boys.[7] The free testosterone index (FTI) emerged as the only important influence on sexual motivation. No independent effect of physical development was found when the FTI was considered simultaneously.

For women, their findings suggest that both androgen mediated development and best friend's behavior were important influences in the initiation of sexual activity.[9] Estrogens, as measured by breast development, were also a significant influence. There was also an interaction between pubertal development and the influence of best friend's behavior, such that biologically immature women were much less likely to be influenced by the sexual behavior of their friends than were mature women.[10]

By its nature adolescence is a time when the peer group emerges to rival the family as a source of social influence. Peers have been found, not surprisingly, to influence a range of behaviors including smoking,[11] drug use,[12] and sexuality. The behavior of close friends of both sexes is likely to impact on the behavior of the adolescent. Billy and Udry found separate effects for the behavior of best same-sex friend and best opposite-sex friend upon the initiation of sexual activity of white females in an urban junior high school in Florida.[8] However, these effects were not found for black females or males of either race.

Clearly the relative influence of biological factors and social factors will vary in different populations of adolescents. The practicing physician should consider both in caring for the adolescent patient.

Family and Environmental Factors

Certain family and environmental factors place young adolescents at risk for the initiation of early sexual activity as well as for an unplanned pregnancy. Adolescents living in poverty are more likely than are their middle-class counterparts to begin sexual activity at an early age and, once sexually active, to become pregnant.[13,14] Limited educational and occupational resources are available to low socioeconomic status women. With these avenues of achievement severely limited, reasons to put off childbearing become less urgent. Further, within certain subcultures, childbearing is viewed as highly desirable and reflective of an important aspect of an adult female's role.[15] In such cases, the incentives for early motherhood may outweigh the deterrents. However, there are variations within socioeconomic groups, and other environmental factors provide reasons for early sexual activity and pregnancy.

Several aspects of family structure and function put the adolescent at increased risk for early sexual activity. Holding constant socioeconomic status and race, those coming from single-parent families and having large numbers of siblings have been identified as being at risk.[13,14,16] Several possible explanations have been offered for this association. Families characterized by father absence and large numbers of children in the household also may have fewer resources with which to provide educational and career opportunities for their offspring. There may be less opportunity for one-to-one communication about sexually related issues. Lax parental supervision and guidance may play a significant role. Large, single-parent families have difficulty providing adequate parental supervision of their children's dating.[13] Lack of parental control over exposure to dating and heterosexual encounters, and the absence of clear parental guidance in these matters may well give the young adolescent opportunities that place her at risk for early sexual activity. Those teens who begin dating earlier and who date more often are those more likely to engage in early sexual intimacy.[17]

Coming from a family in which either a mother or a sister has experienced a pregnancy during adolescence

increases the risk of teen pregnancy.[18] In a recent study of 12 to 16 year olds whose families were Aid for Dependent Children (AFDC) recipients, a twofold risk of childbearing was found among teens living with young pregnant sisters.[19]

The adolescent's negative experience with school has been associated with early sexual activity[20] and pregnancy.[14,21] School difficulty also has been found to be important for placing males at risk for having their girlfriends become pregnant.[14] It is unclear why poor academic achievement increases a teen's risk of early sexual activity and pregnancy. Robbins *et al.*[14] offer two possible explanations. Poor students may become pregnant as an alternative to continued involvement in self-devaluing experiences. The more likely explanation, however, is that positive school experiences may protect the adolescent from a pregnancy. Thus, a lack of resources may result in school difficulties as well as the initiation of early sexual activity and subsequent pregnancy.

Problem Behaviors

Until the past decade, adolescent sexual activity and pregnancy had been viewed in isolation from other behaviors in which the teen may have been engaged. However, there is a growing awareness and empirical support for what has been termed a "syndrome of problem behaviors"[22] or, alternatively, the clustering of "risk-taking behaviors."[23] Included under this rubric are potentially destructive actions or behaviors defined by societal norms as problems, concerns, or undesirable. Such things as smoking, alcohol and drug abuse, early sexual activity, and driving while intoxicated are common examples of behavior problems. It has been suggested that the early adolescent who is engaged in one of these behaviors is likely to be involved in other behaviors of this sort. Evidence supports this notion. The early initiation of sexual activity has been empirically linked to greater problem drinking, drug use, smoking, and delinquent behavior in both black and white teens.[12,20,22,24–26]

While there is increasing support for the existence of clusters of problem behaviors, especially in early adolescence, there has been little investigation into causes of this clustering. An understanding of early adolescent development may provide a piece of the explanation.[23] As mentioned earlier, the peer group assumes increasing importance, especially during early adolescence, and may present pressure or challenges for the adolescent to take risks in a variety of circumstances. Evidence indicates that among 10 to 14 year olds, challenges by peers to engage in risky behaviors are quite common, and for seventh and eighth grade girls, these are likely to take the form of dares to become sexually active.[27]

Because of the cognitive egocentrism typical of this age, feelings of invincibility may lead the adolescent to discount the possibility of personal harm resulting from potentially destructive actions. In addition, the concrete operational thinking characteristic of many very young adolescents may limit their ability to conceptualize future consequences that have not been a part of their experience. For example, if friends have engaged in unprotected sexual activity and have not become pregnant, then the ability to anticipate pregnancy as a possible consequence of their own behavior is not likely. While these cognitive phenomena are ubiquitous in early adolescence, only a small proportion of teens exhibit behaviors reflective of this problem syndrome. Thus, factors other than cognition that contribute to making a young teen susceptible to engage in these kinds of activities need to be considered. Poor self-esteem is often identified by the clinician as one such contributing factor to the occurrence of an early pregnancy. However, it is important to note that there is mixed empirical support for such a hypothesis. In fact, a recent prospective study found that under certain circumstances high self-esteem and popularity were associated with an *increased* risk of being involved in a pregnancy for both sexes.[14]

Contraceptive Use

While a comprehensive discussion of adolescent contraceptive use is beyond the scope of this review, several salient features do stand out. A long lag exists between the onset of teen sexual activity and the first attempt to seek family planning care from a medical provider.[28] The median delay is between 9 and 12 months. For first sexual experiences, male methods including condoms and withdrawal are the predominant methods of contraception, if birth control is used at all. Only half of young women report the use of a method of contraception at first intercourse,[29,30] and only 10 percent report the use of a prescription method.

Zelnick and Kantner found small increases in contraceptive use between 1976 and 1979, but declines in use of the most effective methods, particularly oral contraceptives.[3] Data from 1982 suggests no change in the level of contraceptive use.[4] Of those young women presenting to a family planning clinic for the first time, fully one third had come because they suspected pregnancy.[28] Fear of being pregnant is by far the most common reason cited for making a first clinic visit. Adolescents give a variety of reasons for delaying clinic care including, "just didn't get around to it," fear of family finding out, fear of being examined, thinking birth control is dangerous, and waiting for a closer relationship with their partner. This early period be-

tween the initiation of sexual activity and arrival in clinic is a vulnerable period for the young adolescent. Contraceptive use is poor and the risk of pregnancy is high. Zabin *et al.* found that fully half of premarital first pregnancies to teenagers occurred within six months of beginning sexual intercourse.[29] One fifth occurred in the first month.

A recent international study has reemphasized the United States' failure in providing contraception to adolescents. Jones *et al.* compared the US experience with teenage sexuality, pregnancy, and abortion to five western countries: Canada, England and Wales, Sweden, France, and the Netherlands.[31] While American teenagers were no more sexually active than European teenagers they were *twice* as likely to become pregnant. This suggests a tremendous failure on the part of parents, social institutions, and the health care establishment to reach sexually active adolescents. The authors suggest that greater acceptance and accessibility of contraceptive services to adolescents, a greater openness to discussion about sexuality, and the provision of sex education by our European neighbors account for much of the difference.

Implications for the Primary Care Physician

Understanding who is at risk of initiating early sexual activity is important for not only the adolescent medicine specialist but also the pediatrician, family practitioner, and other primary care physicians who care for adolescents. A working knowledge of the risk factors for early sexual activity is as important for the practitioner who cares for adolescents as is a knowledge of cardiovascular risk factors for the internist. As in other areas of medicine, the care of the adolescent begins with a thorough history including information about family, social background, friends, school and career plans, drug use, and physical development (menarche, body changes). The physical examination also should assess physical maturity and signs of sexually transmitted disease and pregnancy.

General Guidelines

1. Know the community in which you practice. Early sexual activity is common in most US communities. If many of your patients are poor, if they come from large single-parent families, or if there is a family history of prior teen pregnancy, the adolescent is at increased risk.

2. Remember that the onset of puberty puts the teen at risk regardless of chronological age. Interest in sexuality closely follows physical maturity. The postmenarcheal girl is physically capable of becoming pregnant. The early maturer may be at increased risk because cognitive development is not synchronous with physical development. Likewise, the physically mature boy has strong hormonal drives and needs adult guidance to deal with them.

3. Ask about the activities of the peer group. Often it is easier for an adolescent to talk about the behaviors of friends than about his or her own behavior. The existence of role models within the peer group for sexual activity or pregnancy should be assessed, as should the level of challenges and encouragement from the peer group to engage in such behaviors.

4. The adolescent's school environment can be evaluated by discussing the adolescent's expectations and attitudes toward academic achievement, his or her actual school performance, and grade appropriateness.

5. Look for evidence of other problem behaviors. The adolescent who is referred because of drug use or who is in trouble because of delinquency is also at risk of early sexual experimentation.

An accurate assessment of these areas will take both time and a sincere expression of concern and interest. Included in this assessment should be an evaluation of the parental guidelines and supervision regarding dating or other activities with the opposite sex, and the use of free time. If warranted, the physician may opt to meet with the teen and parent together, keeping in mind the balance that must be set between promoting the adolescent's need for autonomy *v* the need for realistic limits and guidelines.

Referral for more extensive evaluation and treatment may be necessary for a particularly troubled teen. However, the primary care physician may be in the best position to minimize the negative consequences of early sexual activity. The importance of providing accessible contraceptive services along with offering sexually related information geared toward the adolescent's cognitive level cannot be overstated. Whenever possible, parental involvement should be a part of this process. Sexually active adolescents should be strongly encouraged to accept responsibility for their behavior, including appropriate protection for pregnancy and STD prevention. Abstinence may be suggested in a nonjudgmental manner with a realistic appraisal of its probable success. Abstinence should never be presented as a sole alternative. Consistent, periodic follow-up should be offered to reinforce compliance. However, the clinician must be aware than the success of these efforts can be compromised by the potency of the risk factors reviewed earlier. Preventive efforts will be successful only when

interventions are developed that address the complexity of the problem of early sexual activity.

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Medical Management of Pregnant Adolescents

JOHN T. REPKE MD

Teenage pregnancy is a serious problem in the United States, and Baltimore has the highest teenage pregnancy rate for cities greater than 500,000 population. Though teen pregnancy represents a serious sociological problem, it also presents rather unique medical challenges. Pregnant teens are more likely to experience complications of pregnancy including iron deficiency anemia, nutritional deficiencies, and low birth weight babies. Appropriate medical management of pregnant adolescents may reduce medical complications associated with teen pregnancy and improve the outcome of these pregnancies and the outlook for the next generation.

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Adolescent pregnancy represents a significant health problem in the United States not only because of the large number of teenagers becoming pregnant and the sociological consequences accompanying this phenomenon but also because of the medical complications associated with adolescent pregnancy. Of many attempts to address the issue of adolescent pregnancy, most appropriately center on preventing pregnancies. Facilitating the learning of responsible sexual behavior among young people is no easy task. To assist teenagers in making choices regarding their sexual activities, educators have recommended changing student curricula in high schools to include family life and human development courses. Additionally, disseminating information on contraception and sexually transmitted diseases (STDs) as well as increasing the availability of health clinics where such information and treatment can be rendered have been suggested.

It remains a dilemma as to the best approach to the teenager when pregnancy has occurred. What choices might be made available to the adolescent may be very controversial. For this article, I shall presume the pregnant teenager wishes to continue her pregnancy to term and shall discuss the medical management that will improve her chances for having the best possible pregnancy outcome.

History and Physical Examination

Seeing an adolescent pregnant patient for the first time is not an easy situation for either clinician or patient. Not uncommonly, the first obstetrical visit represents the first time the adolescent girl will be having a gynecologic examination. Thus it is imperative that she be reassured of her right to confidentiality and that she be supported as she attempts to develop her own sexual identity.

The first pelvic examination is an extremely important event best accomplished by an experienced examiner. This first examination may sensitize her positively or negatively toward subsequent visits.[1] A detailed explanation of what to expect during the examination can greatly reduce anxiety as well as facilitate the actual examination.

The sexual history is also important in this patient population, again underlining the need for reassuring the adolescent about her right to confidentiality. Prior pregnancy history as well as number of sexual partners and any previous STDs play an important role in subsequent obstetric decision making and assigning patients to high-risk groups. It is important to recognize not only the adolescent's right to confidentiality but also her right to confide in those family members she believes would be supportive of her pregnancy. Familial support (when present) may play a major role in optimizing the prenatal care of the patient as well as her intrapartum experience and even early child rearing. Such support becomes important when one considers the trends suggested by surveys from the National Institute of Child Health and Human Development indicating that as many as 40 percent of today's 14-year-olds could become pregnant before they reach age 20.

Prenatal Care Components

Antepartum care of the pregnant adolescent is important. For many years The Johns Hopkins Hospital has advocated a comprehensive programmatic approach to pregnancy in the adolescent population.[2,3] This includes medical care provided by faculty and resident staff as well as intervention by obstetrical nurses, a full-time social worker, and a health educator. The medical care component consists primarily of the initial history and physical examination and the ordering of routine laboratory tests including a complete blood count, a Pap smear and tests for gonorrhea and chlamydia, a serologic test for syphilis, a rubella screen, and a blood type and Rh type with a screen for atypical antibodies. In black patients a hemoglobin electrophoresis also is ordered. Additionally all patients are screened for tuberculosis and for urinary tract infections. One of the most important aspects of the medical care component of the first prenatal visit is establishment of correct gestational age. Not uncommonly, adolescents are uncertain of their last menstrual period or have such irregular cycles that the last menstrual period may not be a reliable aid establishing the time

of conception. For this reason, careful clinical examination with corroboration by ultrasound examination is essential. The correct gestational age is even more important in the third trimester if intrauterine growth retardation is suspected. After the initial history and physical examination, various aspects of her health care are discussed with the patient by the physician. These principles are then reinforced by the health educator and the nurses conducting the patient exit interviews. At their first prenatal visit all patients are required to meet with the social worker to discuss situations that might benefit from social work intervention such as facilitating application for medical assistance, which can simplify the availability of other health care throughout the course of the pregnancy. Also at this first visit the adolescent is introduced to group education programs, an experience that allows the girl to form a bond with her health care providers and staff as well as with other girls sharing a similar experience.

Problem Identification and Screening

Adolescent pregnancy has been associated with an increased risk of low birth weight and preterm delivery.[4] Some analyses have suggested that many of the perinatal losses were due to amniotic fluid infection, placental abruption, and intrauterine growth retardation.[5–8] It has been proposed that nutritional factors may play a role in the pathogenesis of some of these events. With this in mind, the adolescent pregnant patient must be observed very carefully for signs of intrauterine growth retardation and STDs. In addition to this screening, nutritional education should be afforded a high priority since there is a very high frequency of anemia and other nutritional problems among adolescent pregnant patients and since weight gain during pregnancy has been strongly correlated as a determinate of infant birth weight.[9]

Screening for STDs is performed at the initial visit and between weeks 30 to 34 of gestation. Additional screening and treatment is warranted if a history of exposure is provided by the patient. Although group B streptococcal infections have been implicated as a cause of premature labor and delivery and low birth weight, routine screening for group B streptococcus is not indicated at this time.

Preeclampsia is another disorder more common among adolescent patients than among older gravidas. Evidence of increasing blood pressure or sudden unexplained rapid weight gain may be early signs of the development of preeclampsia. Progressive proteinuria and edema may further suggest to the obstetrician the development of preeclampsia. Preeclampsia, while placing the patient at risk for intrauterine growth retardation also increases the risk of placental abruption.

Intrauterine growth retardation is also a frequent problem identified in adolescent pregnant populations. When intrauterine growth retardation is suspect, sonographic evaluation of the fetus is indicated. This should include morphometric measurements as well as an overall estimate of fetal weight and gestational age. Suggestive but inconclusive evidence for intrauterine growth retardation should lead the obstetrician to initiation of regular fetal surveillance using either contraction stress testing or biophysical profile scoring. Utilization of umbilical Doppler velocimetry may aid the clinician in diagnosis of intrauterine growth retardation.[10] This conservative approach will lead to improved outcome for these high-risk pregnancies by allowing continued gestation or by appropriate intervention when testing suggests uteroplacental insufficiency.

Intrapartum Care The adolescent should be encouraged to have the infant's father or a family member present during labor and delivery. Childbirth education classes, movies of normal deliveries, and tours of the labor and delivery area prior to the onset of labor help minimize the anxiety that may accompany the onset of labor and the imminent delivery of her child. A more mature adolescent who has had childbirth education may be able to negotiate the intrapartum period without aid of anesthesia or analgesia. However, most adolescents will require some type of intrapartum anesthesia. Experience suggests that regional anesthesia is an optimal way of managing the labor and delivery of the very young adolescent. It is clear that cesarean section only need be performed in the adolescent population for the same indications that it is performed in the adult population, and that adolescence in and of itself may not increase the risk for delivery by cesarean section.[11]

Postpartum Care Once the monumental tasks of successfully completing antepartum and intrapartum care of the adolescent have been accomplished, a unique challenge lies ahead. In addition to support in her bonding efforts with her new child, much patient education in the care of that child must take place. Additional nutritional education as well as other infant-care skills must be taught the young mother.

Data from our Adolescent Pregnancy Clinic suggest that many of these mothers, if not properly educated, will become pregnant again within 18 months. Therefore it is imperative that the new adolescent mother be given contraceptive counseling and education. Recent data have suggested the inner-city clinic patients are at highest risk of noncompliance with contraceptive methods and subsequently have unplanned pregnancies.[12] A recent study suggests that school and community based education programs may assist in reducing teenage pregnancy rates in the United States.[13] In any event,

postpartum education and close patient follow-up is essential in order to optimize the outcome for the mother and her new child and to minimize the risk of an untimely new pregnancy.

Conclusions

Adolescent pregnancy remains a major problem in the United States. Several observations may be made: most adolescent pregnancies are unintended and unwanted, therefore the first priority needs to be adolescent education about reproductive health. Second, prenatal care tends to begin later for adolescents than for older women. Once again, reproductive health education may underline the need for prenatal care to those women who become pregnant and choose to continue their pregnancies. Third, complications of pregnancy are frequent in this population and should alert the health-care provider to screen patients carefully for anemia, STDs, preeclampsia, and intrauterine growth retardation. It has been estimated that up to 20 percent of adolescents nationwide will have a repeat pregnancy within 12 months. These pregnancies are for the most part unintended and undesired thus emphasizing the need for effective contraceptive counseling. Early repeat pregnancies are associated with failure to return to school to complete the educational process.

The problems of adolescent pregnancy will not be easily solved. However, a comprehensive program of care may aid in the resolution of a serious health problem while also improving the obstetric outcome for those patients who participate. Development of programs emphasizing education and a team approach is clearly the best way to achieve these goals.

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Medical Complications in Adolescent Pregnancy

DEVEREUX N. SALLER, JR, MD and M. CARLYLE CRENSHAW, JR, MD

The most common complications of adolescent pregnancy are low birth weight and premature labor and delivery. Several associated factors have been implicated as etiologic in these complications. Most striking are data indicating that both prematurity and low birth weight can be minimized by aggressive and comprehensive prenatal care. STDs, anemia, and poor maternal weight gain are more common among teens, especially in certain sociologic subsets. Pregnancy induced hypertensive disease also is common but primarily due to the low parity of this group.

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Adolescent pregnancy has been recognized as a significant issue in the field of maternal and child health for many years. Not only does this problem have a profound social and economic impact on the affected individuals and society at large, but also the maternal and pediatric morbidity associated with adolescent pregnancy continues to be an area of clinical interest. National estimates from the early 1980s of adolescent women (defined as age 19 or less) are that on average approximately 53 women per 1000 will give birth per year. Estimates for Maryland are only slightly better at 43 births per 1000 adolescent women.[1–3]

Maternal and perinatal mortality is higher in this age group than in gravidas age 20 or above. The rates of morbidity and mortality increase with decreasing age.[4] The etiology of this increased mortality and associated increased morbidity has been the subject of much investigation and while much data have been accumulated, conclusions have been, at times, contradictory.

Pregnant adolescents are at increased risk of several serious medical complications of pregnancy. Additionally, for a variety of reasons (not the least of which is inadequate prenatal care), appropriate medical treatment often is delayed, and therefore, any response to therapy is delayed and possibly compromised.

Low Birth Weight

The birth of an infant weighing less than 2500 grams seems to the the most common complication of adolescent pregnancy. This association has been found by many investigators[2,4–6] although the proposed mechanism of how adolescence affects birth weight varies.

Several investigators have postulated that either incomplete maternal growth in height (based on a greater height with ensuing pregnancies) or gynecologic age (age at conception minus age at menarche) may be significant factors in low birth weight infants (adjusted for gestational age). These authors suggest that the still-growing and maturing mother may be unable to provide the nutrients required for appropriate placental and fetal growth. Reproducible data for these theories is unavailable, and the authors are not in complete agreement.[7–9]

Numerous sociologic factors seem to have a significant effect on the birth weight of an adolescent pregnancy. Smoking is an obvious factor in low birth weight infants. Smoking appears to be more common in pregnant adolescents than in pregnant adults.[10] Smoking during pregnancy has been shown to significantly decrease birth weights in the adolescent as well as in the adult population. This decrease may result from a combination of premature birth and from intrauterine growth retardation. Scholl[11] demonstrated that adolescent smokers were 3.1 times more likely to have a small for gestation age (SGA) infant than an adolescent nonsmoker. Additionally, that study attributed 14.5 percent of overall low birth weight in adolescents (including preterm deliveries) to smoking. Specifically, 40 percent of growth-retarded (or SGA) infants born to adolescents could be attributed to smoking. Similar data implicate substance abuse (including marijuana and alcohol) as factors in low birth weight among adolescents.[6,12]

Race itself as well as various socioeconomic factors appear to have a direct effect on birthweight among adolescents.[2,12,13] Felice[14] looked specifically at Caucasian, black, and Mexican-American pregnant adolescents in California. They demonstrated that anemia (hematocrit less than 35 percent) was significantly more common in their black population (without evidence of Sickle Cell Disease) and that the birth weights in this population were also significantly lower when compared to their Caucasian or Mexican-American patients. Chronic anemia is a well-known risk factor for both preterm labor and intrauterine growth retardation.

Although the Mexican-American adolescents had lower prepregnancy weights, they tended to gain more weight and gave birth to larger babies than Caucasian or black adolescents. This study, however, was not controlled for a variety of sociological or educational factors, or for prenatal care and patient compliance. Although these factors along with others have clearly been shown to have an impact on birth weight in the pregnant adolescent population, the question remains whether adolescence itself or something associated with adolescence is primarily responsible for the increased incidence of low birth weight. Numerous studies have attempted to answer this question. These studies have centered on factors such as maternal weight gain in pregnancy and adequacy of prenatal care.

Most recently Scholl[6] prospectively evaluated the effect of prenatal care on maternal weight gain, preterm delivery, and birth weight. All patients were offered comprehensive prenatal care. Patient compliance and gestational age when first seen were used to categorize the patients as to the adequacy of their prenatal care. The study demonstrated that adequate prenatal care significantly reduced the risks of low pregnancy weight gain and preterm delivery. Additionally, birth weight was significantly increased although this seemed to be an indirect effect associated with improved maternal weight gain and a decrease in preterm delivery.

These results are in agreement with and expand on the results of several other studies. Horon[15] compared birth weights of infants born to primigravidas under the age of 16 to birth weights of a comparable group of primigravidas between ages 20 to 24. This study found that the most important predictor of birth weight in the adolescent group was maternal weight gain. Leppert[5] studied a similar population and found that pregnant adolescents, even with similar prenatal comprehensive care, were at higher risk for certain complications (including low birth weight) when compared to pregnant adults. However, they showed that the amount of prenatal care is a better predictor of pregnancy outcome than is maternal age alone.

Prematurity

Implicit in the problem of low birth weight is the problem of prematurity. Although many studies on low birth weigh among pregnant adolescents controlled for gestational age[6] some of the early studies did not.[9] Those studies that examined the incidence of preterm labor among adolescents have similarly found it to be more common than in adults. Although Zuckerman[12] found premature delivery (defined as delivery prior to 37 completed weeks' gestation) not to be more common in adolescents than adults, several other studies have demonstrated shorter gestations in adolescents.[15]

Leppert[5] reported that gestational age not maternal age is more strongly predictive of birth weight. This study implies that the effect of maternal age on birth weight may be predominantly associated with prematurity. Scholl[6] additionally demonstrated that those adolescents receiving "adequate" prenatal care (defined as care beginning in the first trimester and compliance with clinic appointments) had a "threefold reduction in the odds of preterm delivery" when compared to similar adolescent patients with inadequate prenatal care.

Other Complications

Other antepartum complications of pregnancy have been evaluated in pregnant adolescents. Although anemia per se is apparently not more common among pregnant adolescents than pregnant adults, it does seem to be strikingly more common in black adolescents (excluding Sickle Cell Disease) compared to Caucasian or Mexican-American adolescents,[14] and could therefore have a significant impact in this subgroup that is overrepresented in the pregnant adolescent population.

Infectious complications have been evaluated, but conclusions are difficult to form. Several studies have found urinary tract infections, chorioamnionitis, and postpartum endometritis not to be more common among adolescents.[5,8] Sexually transmitted diseases (STDs), however, are more common in pregnant adolescents than in pregnant adults, but these data must be more closely examined. Gonorrhea, herpes, and syphilis may be more common in this age group, but the demonstration of statistical significance is difficult due to the overall low incidence. Cervical Group B streptococcus also may be more common.[5] Chlamydia, trachomatis, and Trichomonas vaginitis also appear more common in pregnant adolescents than in pregnant adults, although incidence varies greatly.[16–18] These agents have been implicated in premature delivery and in low birth weight. It should be noted that other compounding factors (including multiple sexual partners, cervical ectopy, previous STD, or contact with STD) are more common in this age group and may explain the increased incidence of these infections independent of age itself.

Although there is little data on a variety of other antepartum medical complications, there is no evidence that any of these are significantly more common among pregnant adolescents. These would include cardiovascular disease, thyroid disease, neurologic disease, collagen vascular disease, renal disease, or hematologic disease. Some diseases may indeed be less common among adolescents: Rh isoimmunization, chronic hypertension, and glucose intolerance.

Several intrapartum complications have been studied. There is no evidence that the risks of malpresentation, placenta previa, placental abruption, or meconium stained amniotic fluid are significantly greater in adolescents. Abnormal fetal heart rate patterns and cephalopelvic disproportion do not appear to be more likely in adolescents. Consequently the cesarean section rate is not increased in adolescent gravidas.

The spectrum of hypertensive disease of pregnancy is of particular interest. Classically pregnancy induced hypertension has been associated with "the extremes of reproductive age, that is, a teenager or women more than 35 years of age."[19] Clinical experience and many older studies have reinforced this long-held belief. However, there are several large studies that fail to demonstrate a significant increase in the incidence of preg-

nancy induced hypertension among adolescents.[5,15] Sukanich[8] specifically examined the issue in this age group while controlling for parity. There was no evidence that hypertensive disease was more common in adolescent primiparas than in adult primiparas, while it was significantly more common during the first pregnancy than during the patient's second pregnancy. The question must be raised whether the hypertensive disorders of pregnancy are indeed not associated with adolescence but with parity alone (at least prior to the advanced maternal age). Because of the compounding of low parity, it is certainly conceivable that many older studies may have incorrectly attributed the risk of pregnancy induced hypertension to low maternal age rather than to parity, which appears to be the true risk factor.

Summary

Pregnancy among adolescents has been and continues to be a significant medical and sociological problem (Tables 1 and 2) especially pervasive in specific segments of our society that tend to be least able to respond appropriately. From this review of the literature, it is clear that a number of problems attributed to adolescence are indeed no more prevalent in teenagers than in adults. It is also apparent that certain problems seemingly more common in adolescents are more dependent on a variety of associated factors than specifically on the patient's age.

Specifically, premature labor and low birth weight remain more common in this age group as do anemia and poor maternal weight gain. All have now been demonstrated to be able to be minimized by agressive and comprehensive medical care. This finding now returns the opportunity for minimizing these problems to health care providers. No longer can we simply attribute these complications to the patient's age; we must now focus our effort on providing the quality of prenatal care these patients deserve and we are capable of providing.

Table 1. Medical Complications Associated with Adolescent Pregnancy

Low birth weight
Preterm labor and delivery
Poor maternal weight gain
Sexually transmitted diseases
Pregnancy induced hypertensive disease
Anemia

Table 2. Medical Complications Not Associated with Adolescent Pregnancy

Cardiovascular disease
Renal disease
Thyroid disease
Neurologic disease
Collagen-vascular disease
Hematologic disease
Perinatal infections (other than sexually transmitted diseases)
Rh isoimmune disease
Chronic hypertension
Glucose intolerance
Placenta previa
Placental abruption
Meconium stained amniotic fluid
Cephalopelvic disproportion
Fetal distress
Cesarean section

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Sexually Transmitted Diseases Among Adolescents

JANET B. HARDY MD

Sexually transmitted infections are a major public health problem among teenagers, particularly those living in poor urban environments and lacking information about STDs. These infections are associated with the early onset of coitus and multiple sex partners. Long-term consequences include chronic and repeated infections, infertility, ectopic pregnancy, and where pregnancy occurs, transmission to the fetus causing fetal loss or illness during the early weeks and months of birth.

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STDs occur among teenagers as they do among adults. The signs, symptoms, consequences, treatment, and mode of transmission are also similar. Since some of the more common of these infections are well described in the special January 1987 *Maryland Medical Journal* devoted to sexually transmitted diseases, this article provides a brief overview of the subject as it pertains to teenagers, emphasizing the scope of problems presented and where they may differ from those of older individuals.

It is estimated that 12 million Americans acquire an STD each year and that over half are aged 15 to 24 years. Many other even younger adolescents aged 10 to 14 years also become infected. During the past quarter century, the frequency of STD infections has increased steadily as society's views with respect to sexual behavior have become more tolerant and open. The increased frequency has been particularly marked among teenagers. Among young adolescents, that is, those below 15 years old, the frequency of early sexual experience with its adverse consequences of unintended pregnancy and STDs continues to rise.

"I can't believe it happened to me" is the usual response of an adolescent confronted with the evidence that she/he has acquired a sexually transmitted infection. Such a statement reflects the myth of invulnerability characteristic of the adolescent stage of development. It also reflects the usual abysmal lack of accurate information, prevalent among adolescents, about the risks associated with unprotected intercourse, especially when multiple partners are involved. Most adolescents, even those from middle-class families, do not understand the potentially serious consequences of some STDs. Despite extensive media coverage during the past few years as the epidemic has unfolded, these young people appear to know little about AIDS (acquired immune deficiency syndrome, HIV infection).

It is well recognized that the prevalence of specific STDs varies, depending on the characteristics of the population under consideration. Certain population groups are at high risk of infection. Risk factors include poverty, overcrowded living conditions, minority group membership, youth, multiple sex partners, intravenous drug use, and failure to use contraceptives (particularly barrier methods). Undoubtedly lack of information about the risks involved and about preventive methods is also a contributing factor.

STDs are spread primarily by intimate sexual contact, heterosexual or homosexual. The Table provides a partial list of *sexually transmissible* infections. The so-called classical venereal diseases (syphilis, gonorrhea, chancroid, lymphogranuloma venereum, and granuloma inguinale) make up only a small portion of the list.

Major advances in laboratory and diagnostic techniques have provided new information that has greatly extended the list of organisms that can be spread by sexual contact. It is now recognized that a number of bacterial, viral, and other parasitic agents, not generally considered STDs, can be transmitted in this manner, for example the hepatitis viruses. Furthermore, well-recognized STD agents, for example, *Neisseria gonorrhoeae* can cause infections that may be sexually transmitted in other sites such as the nasopharynx, which are remote from the genital area. Chlamydial infections have become recognized as a major problem, outnumbering those due to *N. gonorrhoeae* by a factor of 3:1.2.

STDs Among Inner-City Adolescents

Studies at both the University of Maryland[2,3] and Johns Hopkins[4] indicate a high frequency of sexually transmissible infections among Baltimore teenagers. The Johns Hopkins Adolescent Pregnancy Program, which provides each year comprehensive medical, social, and health and parenting education services to some 300 pregnant adolescents (below 18 years of age at registration), has been described elsewhere.[5] The program was successful in improving maternal and infant health. However, the frequency of low birth weight (LBW) remained fairly high (10 percent in 1983). Gonorrhoeal infections noted at registration for prenatal care increased from 8 percent per year in the mid-1970s to 14 percent in 1982. Concern that infection with other STD agents, particularly *C. trachomatis*, might be related to the persistently high frequency of LBW led to the initiation of a pilot study of the prevalence of six STD agents in this adolescent population.

Evidence of maternal infection with *C. trachomatis* was of particular interest because of its recognized

association with conjunctivitis and pneumonia in the neonate and young infant[6,7] and because of reports of a positive relationship with increased frequencies of fetal mortality and low birth weight.[8,9] Other investigators, however, failed to confirm these latter findings.[10,11] Other organisms of possible interest included *Trichomonas vaginalis*, *Candida species*, *Myocoplasma hominis* and *Urea-plasma urealyticum*. *T. vaginalis* has been implicated as a cause of neonatal pneumonia and the mycoplasmas, particularly *M. hominis*, have been associated with perinatal morbidity and mortality by some investigators but not by others.

One hundred fifteen pregnant adolescents were included in the pilot study. Endocervical cultures were obtained at the time of routine pelvic examination carried out early in the third trimester (30 to 32 weeks gestation). The methods used to collect and process specimens have been described elsewhere.[4] A number of variables known to affect birthweights (pre-pregnant weight, weight gain in pregnancy, and cigarette smoking) were taken into account and did not appear to bias results. Only one young woman had a culture positive for the gonococcus, though a number of others (10.4 percent), found to be infected at registration for prenatal care, were successfully treated. However, 37 percent of the adolescents were found to be infected with *C. trachomatis*, 34 percent with *T. vaginalis*, 38 percent with *Candida species*, 75 percent with *M. hominis*, and 90 percent with *Urea-plasma urealyticum*.

Infection with *C. trachomatis* appeared to have no adverse effect on either the duration of pregnancy or on infant birth weight. However, infection with *T. vaginalis* was associated with a shorter gestation (38.2 weeks) and higher frequency of low birth weight (18.0 percent) than among those uninfected with *T. vaginalis*. Additional infection with *C. trachomatis* enhanced the risk of LBW, reaching 27.3 percent. Infections with *candida species* had minimal, if any, effect on gestation and birth weight when present alone but when combined with *T. vaginalis* and *C. trachomatis* the risk of LBW increased to 40.0 percent as compared with 3.4 percent among those uninfected with any of the three organisms.

Among pregnant adolescents, the risk of STDs may extend to their infants. Clinical information from a four-month or longer follow-up was available for only 90 babies; 11 were reported to have conjunctivitis and four to have pneumonia. Of the 11 with conjunctivitis, four had mothers who had been infected with chlamydia, and three of the four were also infected with *T. vaginalis*. One of these three babies also developed pneumonia. The mothers of the three other babies with pneumonia had negative cultures for the two organisms.

Thus, in this small study, *C. trachomatis*, *T. vaginalis*,

Table. Partial List of Sexually Transmissible Diseases

1. Classic Veneral Diseases
   - * a. Syphilis (*Treponema pallidum*)
   - * b. Gonorrhea (*Neisseria gonorrhoeae*)
   - * c. Chancroid (*Haemorphilus ducreyi*)
   - * d. Lymphogranuloma venereum (*Chlamydia trachomatis*, Types L1, 2, 3)
   - * e. Granuloma inguinale (*Calymmatobacterium granulomatis*)
2. Other Bacterial Infections
   - * a. Genital chlamydial infections (*C. trachomatis*, Types D-K)
   - ** b. *Gardnerella vaginalis*
   - ** c. *Mycoplasma hominis*
   - d. *Ureaplasma urealyticum*
   - e. Streptococcus B
   - f. Shigella
   - g. Salmonella
   - h. *Campylobacter* spp.
3. Fungal Infections
   - ** a. Candidiasis (*Candida albicans*)
4. Viral Infections
   - * a. Herpes simplex virus, Type 2
   - * b. Genital warts (human papillomavirus)
   - * c. Molluscum contagiosum
   - * d. Acquired Immune Deficiency Syndrome (AIDS)
   - ** e. Epstein-Barr Virus (infectious mononucleosis)
   - ** f. Hepatitis B
   - ** g. Herpes simplex virus, Type 1
   - h. Cytomegalovirus
   - i. Hepatitis A
5. Protozoa
   - * a. *Trichomonas vaginalis*
   - b. *Giardia lambia*
   - c. *Entamoeba histolytica*
6. Nematodes
   - a. *Enterobius vermicularis*
7. Ectoparasites
   - a. Scabies (*Sarcoptes scabiei*)
   - * b. Crab lice (*Phthirus pubis*)

** 8. Nongonococcal Urethritis and Vaginitis

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* Most commonly sexually transmitted.
** Often sexually transmitted.

and candida species were recovered from endocervical cultures (early in the third trimester) with considerable frequency even though very few of these young patients had signs or symptoms of infection. The maternal infection with *C. trachomatis* appeared associated with infant infections in some instances but not by itself with either short gestation or LBW.

The high frequency of STDs found among pregnant females led us to consider their prevalence among nonpregnant, inner-city teenagers. Unpublished data from similar studies of 193 female students, in grades 7 through 12 in two schools participating in a pregnancy prevention program,[12] indicate a somewhat lower prevalence of the six STD agents than among the pregnant adolescents. Endocervical cultures were obtained during pelvic examinations performed during routine family planning or acute visits to the program's clinic. *N. gonorrhoeae* was isolated from 11 percent, *C. trachomatis* from 28 percent, *T. vaginalis* from 15 percent, and candida from 21 percent. The frequency of infection was related to history of sexual activity but not to age within this young group.

In this group of nonpregnant teenagers, inapparent infections also occurred with considerable frequency. Among the 47 percent without clinical symptoms and signs on pelvic examinations, five percent were found to be infected with the gonococcus, 6 percent with trichomonas, 11 percent with candida, and 25 percent with chlamydia.

Chlamydial infections not only are of importance during pregnancy and the early postnatal period, but also they cause multisystem disease in nonpregnant females and in males.[3] Furthermore, the ascending genital tract infection in the female can cause repeated pelvic inflammatory disease with serious and longlasting consequences for reproduction, that is, an increased risk of ectopic pregnancy[13] and infertility.[14] The risk of cervical cancer is greater among the poor and the black and higher among those who initiate coitus prior to age 17 and who have multiple partners. These are also risk factors for chlamydial infection. An association has been demonstrated between infections with *C. trachomatis* and cervical neoplasia.[15]

Chacko and Lovchik[2] also found slightly higher frequencies of chlamydial infection among pregnant (27 percent) than nonpregnant (23 percent) adolescent females and among males (35 percent) attending the Adolescent Clinic at the University of Maryland. They also stress the importance of inapparent infections. Lovchik[3] suggests that the frequency of chlamydial infections among adolescents is increasing: 37 percent of those screened in the Adolescent Clinic in the first six months of 1986 were positive.

Management of STDs in Adolescents

This article cannot do more than suggest a few practical points about the diagnosis and treatment of common STDs among teenagers.

1. It is legal in Maryland to provide, for minors, confidential diagnosis and treatment for STDs and pregnancy related matters. This means that there is no legal requirement for parental notification.[16] We urge adolescents to tell their parents, and if they wish, we have helped them to do so. But one must bear in mind that insistence on parental notification may mean that the adolescent will forego treatment rather than have parents informed.

2. As multiple infections are common, diagnostic procedures and treatment must provide for the management of more than one infection. Diagnostic testing for chlamydia is described elsewhere by Lovchik.[3]

3. Compliance with any regimen, medical or otherwise, may be difficult for adolescents. The caregiver must establish a comfortable relationship based on understanding adolescent development if good compliance is to be achieved. Adolescents, because of their lack of information about sexuality, reproduction, contraception, and STDs, need education about these matters and an opportunity and encouragement to ask questions.

4. Erythromycin, because it has fewer gastrointestinal side effects, is often a better choice than tetracycline for the treatment of chlamydial infections. Adolescents are prone to discontinue therapy without consultation if a side effect occurs.

5. Test of cure is essential.

6. The examination of sex partners is important if spread of STDs is to be curtailed and reinfection prevented.

Finally, management of a STD provides an excellent opportunity to discuss broader sexuality issues. These may be discussed in a context of the adolescent's personal goals and responsibilities for the prevention of unwanted pregnancies (as well as STDs), which may interfere with achieving those goals. Family planning services should be made available either directly or by referral for those who are sexually active.

AIDS (Acquired Immune Deficiency Syndrome)

New information about this disease becomes available almost daily. HIV infection currently is considered in four categories: (1) the full-blown syndrome, which is reportable; (2) neurological symptoms including progressive dementia; (3) the AIDS complex, which includes some aspects of immune deficiency but is less severe; and (4) inapparent infection with the human immune deficiency virus, that is, a positive HIV test

but no symptoms. This state may last five years or more before clinical signs occur. However, the infected person can transmit the infection during this stage. Transmission is by means of body fluids and blood or blood products and may occur by sexual contact (homosexual and heterosexual), use of contaminated needles by drug addicts, by contaminated transfusions, and by accident among health care workers. Another important means of transmission of HIV is from pregnant woman to her child either as the result of transplacental infection or contamination of the fetus during delivery. Fetal infections and illness may occur even though the infection in the mother is inapparent. It is estimated that a minimum of 50 percent of those with inapparent infection will develop clinical signs of this fatal disease. While rapid progress has been made in developing an understanding of AIDS, there is, as yet, neither effective treatment nor vaccine to prevent its spread.

The average age of patients reported to have AIDS is 35 years; males outnumber females by a ratio of over 9:1.[17] To date in Maryland, only nine cases of AIDS among teenagers have been reported.* However, as indicated in the recent report by Burke *et al.*,[18] there is reason for deep concern about the likelihood of infection in this age group, particularly among urban teenagers in the Baltimore-Washington area.

Based on data from the HIV testing, between October 1985 and March 1986, of 306,061 civilian applicants, for military service from all over the United States, Burke *et al.* found an overall prevalence rate of infection with HIV of 1.5 per 1000 tested, with much higher rates in some areas including the Baltimore-Washington metropolitan area. They were able to identify a number of independent predictors of an HIV positive test. These risk factors included age, black race, male sex, residence in a densely populated area, and residence in a metropolitan area with a high incidence of AIDS cases. Maryland has two areas (Baltimore County and Montgomery County) with high prevalence rates for HIV (≥5/1000). Among the 306,061 applicants, 460 were found to be HIV positive (1.5 per 1000). Of these, 63 (58 males and 5 females) were under 20 years old. These investigators report that in New York City, San Francisco, and the Baltimore-Washington metro area, prevalence rates for HIV approached 20 per 1000 (2 percent). In view of the eventual high risk, once infected, of developing the disease and dying, AIDS mortality among young adults is likely to become a major problem in these cities within the next 10 years.

* Personal communication from Dr. Eric Fine, Maryland State Department of Health, July 1987

Prevention of AIDS and Other STDs

Clearly, education about HIV infection, its devastating consequences, its modes of transmission, and its risk factors for infection is the only practical avenue presently available for preventing the spread of AIDS. In addition to the factors indicated above, multiple sex partners and unprotected intercourse are also risk factors for AIDS, as they are for other STDs. These risk-taking behaviors are frequent among teenagers. Our concerns about the dangers they face are deepened by knowledge of several unemployed and poor male teenagers who have engaged in homosexual prostitution as a means of earning money. Not only do they put themselves, their girl friends, and the babies they bear at high risk but also they put the community at risk for the introduction of HIV into the large reservoir of other STDs already extant. The situation is so serious that despite divergent views as to sexual preferences and the morality of premarital, teenage sexual activity, a consensus must be developed to provide young people, starting no later than fifth or sixth grade, with the means to protect themselves. In my experience,[12] a two-pronged approach can be effective. This includes:

1. A broadly based sexuality education program in the schools stressing the provision of needed information, in a caring environment, which, by encouraging goal setting, personal responsibility, and wise decision making, leads to more responsible sexual behavior and results in a delay in the onset of sexual activity and a reduction in school-age pregnancies. Because of the danger introduced by AIDS, even more emphasis should be placed on abstinence, monogamy, and the proper use of condoms.

2. For those teenagers who decide to continue or to become sexually active, confidential family planning services accompanied by individual education, must be readily available. For many young people, these services must be accessible and free because poor teenagers lack funds to pay for these services.

Such a program will help prevent unintended pregnancies as well as STDs. It is the major recourse in the control of the AIDS epidemic. Education is our best avenue of prevention.

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ad·dict \ ə-'dikt \ *vb* **1 :** to devote or surrender (oneself) to something habitually or excessively **2 :** to cause (a person) to become physiologically dependent upon a drug

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"Life-style" and Pregnancy Outcome in Adolescents

LINDA S. MARTIN MPH and CARMINE M. VALENTE PhD

Adolescent pregnancies have an increased risk of a negative outcome largely because many adolescents have unhealthy habits: smoking, alcohol use, drug use, and poor nutrition. We provide a brief overview of the relationship between these risk factors and pregnancy outcome and of how the physician can best assess risk status and succeed at reducing adolescents' risk.

From the Center for Health Education, Inc., where Martin is Health Educator and Dr. Valente is Executive Director.

Many of the same factors that influence adolescent pregnancy: the power of peer pressure, striving for independence, interest in experimentation, risk taking, and concern with immediate sensation, also result in high rates of alcohol, tobacco, and drug use. In common with pregnancy, substance use, especially alcohol, is becoming more prevalent at younger ages. Smoking among teenage girls has increased in the last decade; it is the only group with increased smoking trends in the United States. Increasing numbers of teenagers are becoming chronic alcohol users, and the use of marijuana and cocaine also has become increasingly widespread among teens. It should be no surprise that studies indicate that alcohol, drug, and tobacco use and pregnancy often occur together in teens.[1,2]

Adolescents tend to use multiple substances if they use any, for example, alcohol combined with one or more drugs. Alcohol, drug, and tobacco use during pregnancy can have similar adverse effects, and the potential for this is compounded when these are combined. Outcomes for each are dose-and-frequency related, with increasingly severe outcomes associated with increased use. The presence of other risk factors including poor nutrition, physical immaturity, and genetic susceptibility affect the probability or severity of negative outcomes. The timing of exposure often is critical to the development of harmful consequences.[3] Most substances pass easily through the placenta by the fourth or fifth week after conception.[4] Organogenesis and limb development occur after the fertilized egg has implanted, the second through eighth week after conception.[5]

Fetal Alcohol Syndrome (FAS), a well-documented effect of heavy drinking, consists of (1) prenatal onset and persistence of growth retardation; (2) central nervous system dysfunction, including mental retardation, and neurological and behavioral defects; and (3) a specific recognizable pattern of craniofacial abnormalities. The term Fetal Alcohol Effects (FAE) is used when only some of these criteria are met. FAE, which is much more common than FAS, is usually manifested by growth retardation and more subtle neurological and behavioral dysfunction.[6]

Moderate use of tobacco, alcohol, opiates, and cocaine are all associated with increased rates of obstetrical complications (spontaneous abortion, premature rupture of membranes, *abruptio placenta*, prematurity) as well as fetal growth retardation.[7–12] A recent prospective study of 31,000 pregnancies indicated that women who have as few as one to two drinks per day during their pregnancies have a substantially increased risk of producing a growth retarded infant.[13] (One drink is equivalent to 12 oz of beer, 4 oz of wine, or 1.2 oz of liquor. Each of these contain 0.5 oz of absolute alcohol.)[14] Smokers' babies have a greatly increased risk of sudden infant death syndrome and have consistently been shown to weigh 150 to 250 grams less than those of nonsmokers.[15,16] The threshold for risk appears to be five or more cigarettes per day.[17] Moderate use of drugs, including alcohol, results in disturbances in sleep/wake cycles, jitteriness, irritability, a nonalert wake state, and lower Apgar scores.[1] Long-term effects on cognitive and behavioral development have been noted with both smoking and alcohol use.[16]

Recent work suggests that fetal marijuana exposure may result in dysmorphic features not unlike those of FAS.[18] Cocaine has been shown to have a teratogenic effect in humans.[10] Caffeine, often consumed in large amounts by adolescents via soft drinks, has been shown to be teratogenic in animals[19,20] and may be a factor in lower birth weights. Combinations of drugs may be toxic even when individual drugs are not. Aspirin, antacids, some vitamins, and even ferrous sulfate (in the first eight weeks of pregnancy) are some medications known to be implicated in adverse fetal effects. For an excellent review of the effects of drugs, see the two-part article by Hill and Kleinberg.[19,20]

Even when substance use does occur, the fetus has remarkable powers of recovery, and the effects may be reversible if use is discontinued early in pregnancy.[21] For example, quitting smoking by the beginning of the second trimester reduces risks to those of a nonsmoker;[11,17] discontinuing heavy drinking before the third trimester has been shown to limit or reverse the adverse effects.[22]

Role of the Physician

It is incumbent upon the physician to identify whether the pregnant adolescent is (or has been) drinking, smoking, or using any drugs (prescribed, over-the-counter, or illicit) and then to encourage and help her to discontinue use as soon as possible. A warm, sensitive manner, a sense of ease and helpfulness, and assurances of privacy and confidentiality will contribute to your

patient's trust and openness, as well as her willingness to accept guidance and help. It is important to show respect for the teenager as an individual, simultaneously allowing her to relax, by asking her about her interests and extracurricular activities. When you begin your assessment, you will need to explain your purpose, assure confidentiality, then work your questions into a general health history. For example

> As your physician, I care about both you and your baby. For me to do my job and help you have a healthy pregnancy and healthy baby, I need to know all about your habits: what foods you eat, what you drink, and what medicines you take. Anything you tell me will not be shared with anyone without your consent.

One of the most difficult things about the interview process is to maintain an accepting manner, neither approving or disapproving of your patient's responses. If she senses you are passing judgment on her one way or another she is more likely to tell you what she thinks you want to hear or what will make you think well of her. A nod, a murmur or a restatement of her response indicates you are listening and want to hear more.

Substance use, although generally somewhat difficult to identify, should at least be highly suspected in the adolescent. Begin with nonthreatening (but important) over-the-counter drug use, asking about her usual use of medications for minor pain, indigestion, nausea, and colds. Proceed to question her about prescription medications, then smoking and drinking (beer, wine, and liquor), and specific recreational drugs. Use of tobacco or alcohol or association with friends who use drugs, suggest a greater possibility of drug use.[1]

For each substance used, ask about amounts and frequency. A simple format for inquiring about substance use is presented in Table 1. If your patient does smoke, additional information about her smoking habit such as an estimate of the strength of her desire to quit, her perceptions about the benefits of quitting, and a description of her previous attempts to quit give you important clues to helping her stop.

Estimating alcohol intake can best be done by asking about amounts and frequency of beer, wine, and liquor intake separately. Encourage your patient to clarify a vague response. It often helps to assume use and suggest an expected range of relatively high amounts. For example, "Do you drink five or six beers per day?[23] Your patient will be much more ready to admit that she only drinks one or two.

Classify your patient's level of consumption according to heavy (at least 45 drinks per month or an average of 10.5 per week with at least five drinks on some occasions), moderate (drinks more often than one time per month but does not meet the criteria for heavy drinking), or light (does not consume alcohol every month and never has more than five drinks on any one occasion).[14]

Some patients reveal more about their alcohol, tobacco, or drug use by completing a written questionnaire, such as the one included in the booklet, *Drugs and Pregnancy* from the American Drug Council (Table 1) (also see D. Peterson's article in this issue). If your patient does use one or more of these substances, it will help you in counseling if you have additional information about her. For example: What does she know about the effects (of alcohol, drugs, or tobacco) on the baby? How likely does she think it is that her baby will be affected by her substance use during pregnancy? What personal benefits to stopping her substance use can she list? (For example: I'll be healthier. I'll set a good example. I'll save money.) What does she think will help her stop use? How does she usually cope with problems or tension? How does she describe her relationship with her family or friends?

If your patient does use alcohol, drugs, or tobacco, she will need strong motives as well as confidence to discontinue their use. You can enhance this effort by using the following suggestions:

1. *Provide information about the hazardous effects on the fetus and the breast-feeding infant* Explain that drugs, medications, alcohol, and tobacco pass to the baby and can harm the baby, slowing its growth and putting it at risk. Emphasize that babies who are affected by these substances are difficult to feed, poor sleepers, highly irritable, developmentally delayed, may look unusual, and often have learning, speech, or hearing problems. All pregnant adolescents should receive information about the hazards of these substances and the need to abstain as well as understand they should not take any medications without checking with you.

2. *Recommend that she discontinue use* Emphasize that you, her physician, want her to discontinue use because you care about her health and her baby. Give simple, specific directions: "No drinks," or "You may have one beer per week."

3. *Emphasize the benefits of stopping now* You can do more to encourage your patient to stop by giving her a hopeful message, emphasizing that she can still prevent harm by stopping now rather than dwelling on the dangers of continuing. For example, "If you stop now, you'll have a better chance of having a healthy baby. It's not too late."[23] In addition to the health of the baby, emphasize immediate benefits such as having more energy, saving money, and the pride that goes along with taking responsibility.

4. *Build her confidence* Acknowledge how difficult it is to stop, but express your confidence in her ability to succeed. The more confidence she has in herself, the

Table 1. Current Medications/Substances

Have you taken any of these in the last six months?	Check If Yes	How Much Do You Usually Take?	How Often Do You Usually Use This?
Pain killers			
Aspirin type (acetylsalicylic acid)			
Tylenol type (acetaminophen)			
Cold or cough medicines			
Allergy medications			
Birth control pills			
Acne medicines			
Vitamins			
Nausea medicines (morning sickness)			
Antacids			
Laxatives			
Antiseizure medications			
Other prescriptions			

Have you ever tried	Check If Yes	When Did You Most Recently Use?	How Much Do You Usually Use Now?	Do You Ever Use More? How Much?	How Often Do You Usually Use Now?
Cigarettes					
Alcohol					
Beer					
Wine					
Liquor					
Marijuana (pot, grass, reefer)					
Stimulants					
diet pills					
amphetamines (speed)					
cocaine					
Tranquilizers (Valium, Librium)					
Sedatives					
sleeping pills					
downers					
Hallucinogens (LSD, PCP)					
Inhalants (glue)					
Opiates					
heroin					
methadone					

Do you ever take any of these drugs together? If so, which ones and how often?

NOTE: adapted from *Drugs and Pregnancy, It's Not Worth the Risk.* American Council for Drug Education, 1986.

more likely she will be a able to make changes in her behavior. Reassure smokers that there are many ways to handle withdrawal symptoms and cravings. Two excellent brochures address handling common problems: *Pregnant? That's Two Good Reasons to Quit* and *Quit for Good.* (See D. Peterson article for ordering information.)

5. *Provide practical advice* Refer to her use of medications and suggest alternative ways to handle recurring problems. Also provide anticipatory guidance for managing symptoms she is likely to encounter during her pregnancy, such as gastrointestinal upset.

Help her formulate acceptable alternatives to alcohol and recreational drug use. She may particularly need help dealing with peer situations.

Once a decision is made to stop smoking, there are several things a smoker can do in a short preparatory period that will help her successfully quit. Identifying situations that trigger her to smoke and planning ways to avoid or handle those situations are key elements of planning for quitting. Setting a specific target quit date is also essential. A signed prescription from you, her physician, outlining these recommendations, provides added weight[24–28] (see Figure 1). For smoking, as well as drug and alcohol use, it is important to tell your patient that you will ask her about her progress at the next visit. (See D. Peterson's article for patient education materials.)

6. *Sustain a continuing, supportive relationship* Continue to convey warmth and caring by discussing her feelings about her pregnancy and her attempts to discontinue substance use. Praise abstinence and encourage her family, when possible, to do the same. Avoid criticism that could only harm your therapeutic relationship. Continued assessment of drug use and urine toxicology screens should be performed periodically to check for a return to substance use.

7. *Refer* Recommend that she see a drug abuse or alcohol specialist if abstinence is not achieved within two weeks. Peer-group support may be the best kind of therapy for an adolescent, if that can be arranged. Other options are individual psychotherapy, family therapy, a residential community, or hospitalization. As her physician, you should continue to have basic responsibility for her prenatal care.

Figure 1. Prescription for Stopping Smoking[24–28]

I agree to:

____ read the materials I have been given

____ write down my reasons for wanting to quit smoking

____ write down each cigarette I smoke, time of day, place or activity, and mood or reason, for four days

____ write down how I could avoid the situation or what I could do instead of smoking, for each of my main signals to smoke

____ quit smoking. My quit day will be:

_____

Patient signature: _____

Physician signature: _____

Next appointment: _____

_____

Nutrition

The perspective on nutritional requirements during pregnancy has changed dramatically in recent years. The fetus does not perform as a parasite, drawing all necessary nourishment from the stores of the mother and depleting her. Strict weight control is a management priority of the past.[29,30] We now know that fetal well-being and growth is heavily dependent on meeting the increased nutritional requirements of the pregnant woman and the fetus.[31]

The pregnant teenager is at particular risk for meeting her nutritional needs, which differ from those of the mature woman. Especially during the two years after menarche (generally less than 15 years old), the adolescent achieves marked increments in her body mass and nutrient stores. Growth then gradually diminishes from age 15 to 17, or until about four years after menarche when physiological maturity is reached.[32,33] Some authorities believe the increased nutrient requirements of the young adolescent compete with the caloric and nutrient demands of pregnancy and the growth needs of the fetus, potentially compromising the health of both mother and fetus.[32–35]

Teenagers are unlikely to meet their basic nutrient needs even if they are not pregnant. They are notorious for having poor eating habits: skipping meals (especially breakfast) and bizarre dieting. Both can lead to ketosis, which is thought to adversely affect the neurological development of the offspring.[34] As much as one-fourth of adolescent girls' total caloric consumption comes from high salt, sugar, and fat foods, which are low in any other nutrients. Adolescent diets are generally low in dairy foods, fruits, vegetables, and total calories. Use of drugs and alcohol may further affect nutrient intake. As a result of these patterns, adolescents are often under- or overweight and have a poorer nutritional status than any other age group.[36–38] Pregnant teens, therefore, are at special nutritional risk. In addition, teenagers who carry their pregnancies to term often have low incomes with inadequate living arrangements,

both potentially affecting food availability and dietary habits.[39] They tend to seek prenatal care late in their pregnancies. These factors add to the adolescent's risk of inadequate nutrition during pregnancy.

The specific nutrient requirements of the pregnant adolescent have been estimated by combining the recommended increment for the pregnant adult to the Recommended Dietary Allowance (RDA) for nonpregnant adolescents (Table 2).[36] Consistent with the previous discussion, the requirements for the younger adolescent (who is less likely to have completed her own growth) are usually greater and more critical than those for the older adolescent. Surveys indicate that pregnant adolescents are consistently deficient in calories, calcium, iron, zinc, Vitamins A, C, B_6, and folacin, all essential in adequate amounts for a healthy pregnancy.[40] Inadequate caloric intake is of particular concern, as teens are less likely to obtain adequate nutrients and may use protein for energy consumption. Calcium intake tends to be low because of inadequate intake of dairy products and high intake of soft drinks. Soft drinks, in addition to replacing milk as a beverage, are high in phosphate content, which can impair absorption of calcium. Calcium intake can also be compromised in adolescents who have a lactose deficiency, which is very common among blacks.[40] Highly processed foods or diets low in protein can be deficient in zinc.[37]

Iron deficiency is a widespread problem among pregnant adolescents whose diet is composed in large part of nutrient poor snacks. Thirty to 60 mg of supplemental iron and 300 to 500 mg of folacin are recommended.[40]

Adequate maternal weight gain, a visible indicator of nutritional status, is in itself the primary nutritional requirement. Several studies have shown that higher pregnancy weight gain, especially in underweight women, is clearly related to higher infant birth weights and improved postnatal growth and neurological development, independent of any other factors (race, pregravid weight, age, smoking). Low pregravid weight and low weight gain during pregnancy are particularly problematic for adolescents, especially young adolescents who may be in the midst of their own growth spurt.[33,37]

In order to determine the amount of weight an adolescent should gain during pregnancy:

1. Allowance should be made for her normal, nonpregnant growth. The years since menarche (gynecologic age) are an indirect measure of her growth potential.[33] The average age of menarche is 12.5 years. Full fertility is generally not reached until two years after menarche. At this time, although the rate of growth is diminished, the adolescent can be expected to gain approximately 1 kg (2 lbs) every six months.[40]

2. Weight gain for the support of the pregnancy should be enough to reach a "critical" body mass in order to provide optimal conditions for growth.[41] An adolescent (or adult woman) who is at average weight for her height, should gain 20 percent above her weight during the pregnancy or 25 to 30 lbs (minimum 20 lbs).[30]

3. If the adolescent (or adult woman) is underweight, she also needs to gain a weight increment that will bring her up to standard weight for height according to weight/height for age percentile from the standard table for adolescents.[42] She should begin gaining this weight as soon as possible and ideally should reach her standard weight by the end of the first trimester.[43]

For example, a 15-year-old adolescent who is 15 pounds underweight and who reached menarche at 13 years (gynecologic age of 2 years) should be encouraged to gain:

2.5 pounds— for estimate normal nonpregnant growth during 9 months
27.5 pounds— average pregnancy gain
15.0 pounds— estimated weight deficit

45.0 pounds[40]

4. Obese teens should be encouraged to gain a total of 20 pounds in order to prevent ketosis and obtain adequate nutrients.[40]

A recent survey found that a majority of mothers were not given any weight gain advice by their physicians or they were advised to restrict weight gain to 22 pounds or less (some less than 16 pounds). These mothers were far more likely than others to have inadequate weight gain. Teenage mothers were among those who were more likely to be given a limit of under 22 pounds.[30]

Table 2. Total Estimated Nutrient Needs

Key Nutrients and Units	Pregnancy Increment	Total Estimated Need	
		11–14 Yrs	15–18 Yrs
Energy (Kcal)	300	2,500	2,400
Protein (g)	30	76	76
Calcium (mg)	400	1,600	1,600
Vitamin A (mcg RE)	200	1,000	1,000
Vitamin C (mg)	20	70	80
Folacin (mcg)	400	800	800
Iron (mg)	30–60	30–60	30–60

NOTE: adapted from U.S. Department of Agriculture, Food & Nutrition Service, "Nutrition Services in Perinatal Care," Committee on Nutrition of the Mother and Preschool Child, Food & Nutrition Board, National Academy of Sciences, Washington, D.C., 1981.

Figure 2: Serving Sizes and Specific Foods in Each Food Group for Pregnant Adolescents

Food Group	No. of Usual Servings Per Day	Recommended No. of Servings Per Day*	Problem Areas
Milk/milk products Serving size milk—1 c hard cheese—1 oz yogurt—1 c cottage cheese—1½ c		6	
Protein foods (animal, legumes, nuts) Serving size: meat/poultry/fish—3 oz beans—1 c peanut butter—¼ c nuts—½ c eggs—1 to 2		4	
Fruits/vegetables Serving size: Vitamin C rich: orange—1 grapefruit—½ orange juice—½ c broccoli—½ c Vitamin A rich: carrots—⅔ c cantaloupe—¼		4 (1) (1)	
Whole grain cereal Serving size: bread—1 slice cereal—½ c		**4**	
Beverages		8 noncaffeinated glasses	

* Marino, D. and King, J. "Nutritional Concerns During Adolescence." *Pediatr Clin North Am* 27 (1980).

It is essential to individualize your dietary recommendations by initially assessing your patient's nutritional status and dietary practices. Such an assessment should address the following:

1. *Gynecological age and growth potential* Is your patient within or past two (or even three) years of menarche?

2. *Weight-for-height status* Is she underweight or overweight (below 90 percent or above 120 percent of standard weight for height and age)? (Use table geared for adolescents.)[43]

3. *Clinical signs and laboratory values* For example, is she anemic? Does she have clinical signs of vitamin or mineral deficiencies? A useful booklet providing an excellent description of laboratory and clinical signs is *Assessment of Maternal Nutrition.* (See D. Peterson article for ordering information.)

4. *Typical diet* To determine what foods the teenager consumes and how often, you can do a 24-hour recall, asking about foods eaten in relation to meal times and regular activities. This, however, is not necessarily representative of her diet. You can gather more complete information by asking her to complete a food frequency questionnaire or, preferably, asking her to keep an eating diary over the next few days, such as the one in the booklet, *Assessment of Maternal Nutrition.* Check for specific dietary practices: irregular meals, skipping meals, special diet, frequent fast foods, snacking patterns, deliberate restriction of food intake, inadequate fluid intake, vegetarianism, use of vitamin or other supplements, and caffeine intake. Summarize her diet according to major food groups. Any recommendations you make will be most effective if you involve the teenager in evaluating the strengths and weaknesses of her diet by asking *her* to compare her diet with a recommended diet (see Figure 2).

5. *Food allergies and intolerances* Will she need to compensate for a nutrient deficit resulting from these?

6. *Dietary knowledge, misconceptions, and concerns, especially about weight gain* Many pregnant teenagers do not know what they should be eating or how much they should gain. Many are concerned about keeping a slim figure. Some may wish to hide or deny their pregnancy and, therefore, avoid weight gain. Some think that after they gain eight pounds for the baby, the rest gained is just fat. Some teenagers may fear reprisals from their physicians if they gain weight. Some may want to avoid weight gain in order to have a smaller baby for an easier delivery. To find out where she stands on the weight issue, ask her how much weight she expects or is prepared to gain.

7. *Gastrointestinal discomforts* These are common in pregnancy and can certainly influence food intake.

The way in which you counsel patients will have a

significant impact on your success. Using these strategies can help:

1. *Provide positive feedback* Begin by telling her what she is doing right.

2. *Inform* Explain the importance of good nutrition and weight gain during pregnancy. A description (and pictures) of the present stage of fetal development should help make the presence of the baby more real to her and make your advice more pertinent. Explain how her baby gets the nutrients (or building blocks and energy) it needs from the food she eats. She may need to be reassured that, as a result, it is normal and desirable to gain weight, and that she is likely to return close to her prepregnant weight. She should be told how much weight she should gain at the minimum, at approximately what rate, as well as where the weight goes. Explain that she will look and feel better (better complexion, shiny hair, stronger fingernails, more energy), cope with pregnancy better, and have a healthier baby if she eats well.

3. *Advise* Make recommendations about ways she can alter her eating habits to improve her nutrient intake. To make the best progress, encourage her to plan her own solutions as much as possible. For example, "Can you think of ways to increase the amount of milk you drink?" Make your recommendations few in number, small in scope, and specific. "Try to have breakfast at least three times this week." Be realistic. If she goes to fast food restaurants often, suggest fast food places with more variety, such as salads. Also suggest that she make better food choices (pizza or cheeseburger with lettuce and tomato instead of plain burger, or milk or milkshake instead of a soft drink).

4. *Counseling* for many teenagers will need to address:

- snacking: identify nutritious snacks (cheese, peanut butter, hard-cooked eggs, raisins, juice)
- breakfast: unorthodox breakfast ideas that are quick and convenient might be just the thing (milkshake or a sandwich that is portable)
- special diets: note the positive aspects of the diet and then address the problems; vegetarian diets may be fine if milk and eggs are included
- supplements: many teenagers will have difficulty taking supplements and will not take them regularly, if at all. Emphasize their importance, determine the problems with taking them. Emphasize food sources for iron, calcium, and folic acid. Be aware that cheese, milk, and eggs are all low in iron (Table 3).
- resources: encourage participation in food stamp or WIC programs if appropriate
- family: all pregnant teenagers can benefit from support from their families and boyfriends; encourage their involvement

Table 3. Food Sources

Iron Source*	Calcium Sources	Folic Acid Sources
Animal Sources (mostly fully absorbed)	Milk & milk products: yogurt, cheese, cottage cheese, soups made with milk, ice cream or ice milk, foods prepared with powdered milk	Liver
Liver	Legumes	Dark green leafy vegetables
Oysters	Nuts	Orange juice
Lean beef	Dried fruits	Chick peas
Pork	Tofu	
Lamb	Dark green leafy vegetables	
Sardines	Breads	
Turkey	Cereals	
Chicken		
Tuna		
Fish		
Vegetable Sources		
Fortified breakfast cereals		
Dried fruits		
Dried Beans		
Dried Apricots		

* Take with Vitamin C source

5. *Summarize* Let your patient describe the main points of discussion and her intentions. Add or correct as needed. To reinforce your advice give written instructions.

6. *Follow-up* Has she been able to make the changes on which you have agreed? Praise her attempts and successes and suggest additional changes as needed.

The prospects for success with decreasing alcohol, drug, and tobacco use and improving nutrition status are excellent if the physician performs a careful assessment and provides firm but sensitive advice.

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Psychological and Social Considerations in Adolescent Pregnancy Management

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Adolescents go about the major task of moving from childhood to adulthood in a predictably less-than-orderly fashion. Many adolescents noisily stumble while others move quietly through the obstacle course referred to as adolescence. Whether in an obvious or subtle manner, when adolescents falter in the sexual area, pregnancy is sometimes the result. With pregnancy comes important psychological and social considerations for the adolescent as well as for the health-care provider, who has the unique opportunity to assist with pregnancy management and to encourage emotional growth.

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Pregnancy is a challenge in any female's life regardless of the circumstances.[1] However, for the adolescent the crisis is greatly intensified because it adds another level of complexity to an already complex period of physical and emotional change. Especially during adolescence the physical body prepares for reproduction with total disregard for any corresponding emotional readiness.

The emotional tasks the adolescent faces are described by Erikson as the developmental tasks of adolescence: (1) to develop an individual identity, (2) to achieve separation from the family of origin, (3) to develop significant individual and group friendships, (4) to engage in relationships involving emotional attachments related to courtship, and (5) to establish behaviors related to career planning.[2] The crisis of pregnancy and the need for adolescents to confront these developmental tasks as the body makes expected physical changes combine in such a manner that adolescents are forced to experience a change in the way they view themselves, their environment, and the people with whom they interact.

The pregnant adolescent faces a pattern of pregnancy management that can be described in four stages: informing self, informing others, making a decision, and coping with possible outcomes. These stages do not always progress in an orderly pattern, nor do they necessarily occur over a prolonged period of time.

During the stages of pregnancy management, it is important for health-care providers to remember the adolescent needs answers to the questions "Am I normal?" "Have I failed?" "Am I worthwhile?" and "Will I survive this?" The question of survival refers not only to physical survival of life and death, but also emotional survival in the sense of recovery or defeat. If these questions are kept in mind and answered even when they are not verbalized, the health care provider will make positive contributions to the adolescent's emotional health and ability to cope with the pregnancy. When the physician, nurse, or any other health provider is unable to answer or is unsure about the answers to these questions, it is a clear indication of a need to refer for an assessment and follow-up counseling.

Informing Self

The first stage of pregnancy awareness can be met by the adolescent with a wide range of feelings and behaviors affected by the adolescent's age, maturational level, interpretation of her life story, her developing values and values held by her immediate and extended family, as well as the tolerance level of the immediate and general community of which she views herself a member.[3] Some adolescents react with panic and shock while others welcome the pregnancy with hope of filling an emotional void or making a statement about adult status.[4] Whether the emotional reaction is positive or negative, the adolescent needs a medical confirmation of pregnancy and an evaluation of her ability to manage future stages with minimal direction and counseling.

A pregnancy resulting from incest or rape carries a secret set of feelings and behaviors that are open to scrutiny and help only when the adolescent has a feeling of hope and trust. Sometimes there are only hints of a problem, with no particular evidence or confirmation by the adolescent. In these situations, appropriate counseling referrals must be made and reporting guidelines followed.

This first stage is so problematic for some adolescents that they deny pregnancy. The adolescent appears in the hospital emergency room with a "stomach ache" in the last trimester of pregnancy, or the baby is delivered at home much to the adolescent's surprise and that of unbelieving family members who either suspected and were comforted by their own denial or were so absorbed in their own challenges of daily living that they never noticed. These adolescents, the father of the baby, and their families need counseling to address emotional needs as well as direction in obtaining and using appropriate community services.

Adolescents at this stage of pregnancy need validation of the physical reality of pregnancy and a sensitivity to their need to be in control. Since the young female rarely has a sense of ownership of her body and little permission to know how it works, full-figure diagrams explaining pregnancy are helpful. They assist the adolescent in dealing with often unspoken concerns about

physical injury and loss of control since pregnancy is occurring at a time when she is working on her own physical and emotional identity.

Sometimes adolescents who have negative pregnancy test results after multiple acts of unprotected sexual intercourse become concerned about being abnormal and feel a need to prove fertility by becoming pregnant. These adolescents need psychosocial assessment with attention to specifics of a sexual history, follow-up counseling, education about reproduction, and a referral for contraception if acceptable to the adolescent.

Informing Others

The second stage of informing and involving others often is delayed because of possible disapproval and lack of support expected from others, especially parents. Furstenberg cites a three to four month delay in informing parents; some parents are never informed but rather learn from a third party or detect the pregnancy themselves.[5] Adolescents expect parents to respond with disappointment coupled with anger. However some parents, especially mothers, look forward to this opportunity to nurture an infant again. Parents who were adolescents at the time of their first pregnancy may unwittingly program their child for a pregnancy with constant admonishments to be careful not to end up the way they did. Sometimes the threat of the adolescent succeeding where parents failed causes parents unconsciously to demand a pregnancy to lessen their guilt.

Fathers of adolescents experiencing a pregnancy respond principally with hurt and anger, but with the focus that the pregnant daughter can no longer be viewed as his innocent baby. The reaction is more severe if this is the child favored by the father.

Whatever the initial reaction, most parents move to a level of acceptance and varying degrees of support. For the parents who never accept or support, the adolescent must seek and receive the nurturing she needs elsewhere, moving toward individuation with much more difficulty.[3,5]

The father, who may or may not be an adolescent, is often ignored or forgotten because he shows no physical signs of change. Our society grants males only limited permission to give signals related to emotional needs and confusion. When the father is involved in a positive manner, he may find his role difficult if he is the object of negative feelings from the female's family and possibly his family. His reaction to the pregnancy and the pregnant girl often becomes important in subsequent decision making. Friends and relatives are called on when other relationships are faulty or the pregnant adolescent lacks the courage to deal with parents. They may be asked to assist with informing parents or to help with future steps in pregnancy management.

At this stage the adolescent needs assistance in separating her beliefs, values, feelings, and motivations from those of others important in her life. The younger the adolescent, the more difficult this becomes. For the very young or the emotionally immature adolescent, this can be accomplished by directing her to consider the positions and feelings of others. For the more mature adolescent, her developing individuality can be encouraged and validated in this process. If the father is available, he should be encouraged to participate in this and future stages.

Making a Decision

After the first two stages of informing self and others, the pregnant adolescent is faced with the practical decision of what to do about the pregnancy. Adolescents are accustomed to reacting to adult decisions or being a participant in the decision-making process rather than being the decision maker. The pregnant adolescent, overwhelmed by a real event, is subject to the normal adolescent characteristics of anxiety, situational regression, poor reality testing, massive denial, an inability to clearly conceptualize the future, and immature mental functioning. All these characteristics are psychological interferences in effective decision making.[6] To further complicate matters, parents of adolescents usually are so overwhelmed by the event that they also are emotionally compromised and not as capable of functioning at an adult level. Parents often have the emotional need to review their own adolescence and to critically examine their parenting role. At this stage parents appreciate the importance of their involvement but may be surprised and frustrated to realize the limitations of their decision-making power.

In considering the choices of abortion, adoption or parenthood, counseling becomes essential. At this point, it is important to allow the adolescent to be the decision maker even if her decision is to abdicate her role: deciding not to decide. The adolescent may decide defiantly, sadly, in immature joyful anticipation, or in passive dependent defeat. In whatever manner the decision is made, the counselor must recognize and stress to the adolescent the realities surrounding her decision and the limitations on her ability to change her options. At all times the counselor's role is directing the process of decision making, allowing the adolescent who owns the problem to have ownership of the solution. A counselor or health care provider who becomes involved in making the actual decision becomes less effective in directing the process.

Coping with Outcomes

The last stage of handling the pregnancy outcome brings the adolescent to the point of coping with either planned or unplanned events. Planned outcomes may be abortion, adoption, or parenthood. If abortion is the choice and performed early, it is a single, time-limited event. However, second trimester abortions often are emotionally more traumatic due to the length of pregnancy, a procedure that mimics labor in later stages of pregnancy, and a hospital stay that exposes the adolescent to a variety of perceived or actual negative responses from others.[6]

The choice of adoption is difficult on many levels because the adolescent has to deal with her own feelings as well as the extremes of feelings and opinions of others. She also has to cope with a pregnancy experience where educational programs, provision of medical care, and literature generally are geared to the adolescent planning to care for the infant.

The choice of abortion or adoption leaves the adolescent with no tangible evidence of her pregnancy and mixed messages from society regarding the decision.

Often missed in either of these planned choices is that the adolescent emerges as a parent. The adolescent who leaves the hospital with her obvious symbol of parenthood, the infant, makes a statement to herself, her family, and society about her emotional and physical needs as an adolescent and a parent. The adolescent who chooses abortion or adoption carries an emotional parenthood with less assistance about how to put the experience into perspective in relation to developmental tasks. When the necessary assistance is given, a grief process can be experienced as normal and expected. Adolescents can be taught that grief reactions are of varying intensity with no prescribed length of time or time of occurrence. They can be helped to understand that their decision to abort or place the baby for adoption is an acknowledgment of a significant event that does not necessarily have to imply a component of guilt or regret. Sometimes the most intense feeling after an abortion or adoption is relief.

Adolescents need to be aware that seeking counseling is encouraged when there is a feeling of being overwhelmed, confused, or out of control. Such permission takes little time to give and can have a positive impact, but it is often overlooked because adolescents seldom show adults their emotional needs. Adults may fail to recognize the issue of loss as being relevant to adolescents. It is also important to realize the potential for emotional loss by the parenting adolescent who has to juggle her own developmental needs as well as her responsibility to a dependent infant.[7] If attention is given to the adolescent parent's need for nurturing, the adolescent is better able to nurture her infant. Each choice can be met more successfully by the adolescent who is provided with an understanding, supportive network and skillful counseling.

Unplanned outcomes of pregnancy (birth of a child with a defect, spontaneous abortion, miscarriage, stillbirth, and death of the infant) carry the overwhelming feelings of guilt, failure, and loss of control. All of these outcomes cause the adolescent to review thoughts, feelings, and actions that may be deemed connected to the outcome. Guilt may be intensified if there are feelings of resentment about the extra care needed by the infant or if there is a feeling of relief about pregnancy or infant loss. The adolescent's concern about her own feelings and needs or her preoccupation with her sense of loss can be met with lack of sympathy and support from family, peers, or sometimes health care staff.[1] They may view the adolescent as self-centered or unappreciative of a better, maybe even more desired outcome if there is no surviving infant since the adolescent is considered immature and unprepared for the responsibility. At other times, the outcome is seen by the adolescent and others as a possible punishment for past behaviors or thoughts.

Adolescents experiencing a pregnancy loss need to have their sexuality recognized and accepted, not judged; to be entitled to grieve and to be given permission to do so; and to be assisted in dealing with family, peers, and educational or skill development activities in a manner that takes their emotional needs into account.

In all stages of pregnancy management, it is important to remember that the adolescent faces changes, feelings, behaviors, and attitudes that mature adults would be challenged to meet successfully. Pregnancy offers the rare opportunity for health-care providers to interact with the adolescent over time with a degree of consistency usually only available when adolescents are physically or mentally ill.

The educational program for the pregnant adolescent should be organized with the developmental tasks of adolescence in mind. Whether the education is time limited and specific to certain pregnancy options or an extended program, adolescents can be given useful information that will assist them in coping with present and future circumstances.

A sensitive and caring staff is important to the pregnant adolescent. Medical and counseling staff roles are obvious, but the person who answers the phone and greets the adolescent on arrival for care is often the person who has to make sense of the emotional and verbal code the adolescent uses or has to calm an irate or tearful parent. The role and importance of each person in the coordinated care the adolescent needs should be valued and supported.

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Referrals to community agencies should allow the adolescent to feel in control and to make choices. Adolescents who need financial assistance for prenatal care can be guided to the medical assistance and prenatal assistance programs offering them the ability to enter a health care facility of their choice early in pregnancy.

In providing health care to pregnant adolescents we must strive to understand them as individuals as well as to promote and protect their physical and emotional well being.

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Adolescent Parenthood: Implications for Care of the Mother and Child

MARILEE COMFORT PhD, LOUISE M. WULFF ScD, and VINCENT L. SMERIGLIO PhD

In the life-span view of human development, the optimal time for parenting begins in early adulthood. Prior to this age the individual is growing, developing, and preparing to enter society as a contributing individual. Health care professionals' concern over premature parenting has focused on prevention of pregnancy in adolescents, but an examination of births in Maryland (1983) shows that 13.7 percent of births were to adolescents.[1] While it is appropriate to continue efforts focused on pregnancy prevention, it is also important to optimize parenting for adolescent mothers.

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The concept of risk for the adolescent mother and her infant is multidimensional, influencing the health, growth, psychosocial development, and life experiences of both.[2]

Infant Risks Infants born to adolescents are at increased risk for lower than optimal birth weight.[3] In the neonatal period, low birth weight infants are at risk for metabolic, central nervous system, and pulmonary disorders as well as being more susceptible to infections. These infants also are more likely to be diagnosed as having cerebral palsy.[4] The disorders experienced in the perinatal period may, in turn, place the infant at increased risk for mental retardation.[5]

Once the infant has survived the neonatal period, infants of adolescent mothers are more likely to be hospitalized than are infants of adult mothers.[6] The adolescent mother may be inexperienced in caring for babies or may have difficulty interpreting her child's signals and cues. Furthermore, adolescents are more likely to have less realistic expectations and child-rearing attitudes than do their adult counterparts,[7] which may place an additional environmental burden and increased risk of abuse and neglect as well as accidental injury on the growing infant.[6] Differences in mother-infant interaction and in the organization as well as the enrichment of the home environment may result in developmental delay and may compound delays attributable to complications of low birth weight.[2]

Adolescent Risks Adolescent mothers are preoccupied with the developmental tasks critical to final preparation for adult independence. This has significant implications both for the adolescent and her infant. A review of research literature on adolescent parenthood by Stevens[8] describes a population at higher risk for lower levels of education. The birth of an infant to an adolescent often interrupts her progress in school. Although schools no longer prohibit pregnant and parenting adolescents from participation in an academic program, the practical problems associated with child care arrangements often prevent graduation from high school. Vocational training and employment opportunities may be reduced for the adolescent unable to locate or pay for child care services. Opportunities for social interaction with peers may be limited by both parental responsibilities and lack of funds, with a consequent sense of isolation and loneliness. These factors may structure a lifetime of poverty and continued health risks for both mother and infant.[9]

Contrary to the prevailing notions espoused in most of the clinical and research literature, adolescent parenthood does not necessarily lead solely to negative outcomes. In a literature review on teenage motherhood, Buchholz and Gol[10] point out that when considered in her cultural and familial milieu, the teenage parent may be fulfilling the expectations for the transition to adulthood. Viewed in this context, parenting could enhance self-esteem, ego strength, or a teenager's sense of control of life circumstances.

Psychosocial Factors Contributing to Adolescent Parenting

The psychosocial factors associated with adolescent parenting comprise an intricate network of contributions from the adolescent mother, the infant, and the social context of the mother and child. Current developmental theory suggests that optimal parent and child functioning result when a "goodness of fit"[11] is achieved among parent, child, and environmental factors.[12] This is an apt conceptual model to use when planning services for adolescent mothers and infants who vary considerably in terms of personal characteristics, environmental circumstances, and support systems.

Maternal Factors The transition to parenthood requires a parent of any age to reorganize self-perceptions, family roles, and routine activities. These changes are an extra challenge to the teenager for whom the developmental tasks of adolescence and parenthood conflict.[9] The adolescent mother must master her own changes in body image, identity, and social roles while simultaneously acquiring the knowledge and experience to provide care and nurturance for her baby. The interaction of normative adolescent changes in personal characteristics such as self-esteem, locus of control, and the cognitive ability to reason abstractly[13,14] and nor-

mative changes in parental behavior and functioning during the postpartum and early childhood periods contribute to parent and child outcomes.[15]

Infant Factors In addition to characteristics of the mother, infant factors influence adolescent parenting. Health and developmental status; routine feeding, play, and sleep patterns; and temperament vary greatly among individual babies. Infant factors can affect the mother's experiences of parenting, the infant's experiences of being parented, and the mother-child relationship.[16] For example, the adolescent mother may not be aware of the impact of *how* she cares for the baby on infant behavior and developmental outcomes, or may not perceive the baby as a separate and unique individual with needs apart from hers.[10] Infant characteristics and behavior and the mother's perception of them interact to influence the bidirectional process of parenting by the adolescent.

Social Context Another set of factors contributing to adolescent parenting is the social context of the mother and child. Social support is particularly important for parental adjustment during the transition to parenthood when the family must reorganize routine activities, roles, and interpersonal relationships to accommodate the infant.[17] For the adolescent mother, the need for support may be further complicated by the convergence of the old role of developing teenager and the new roles of mate and parent.[9,18] The roles of the mother, father, grandmother, or other caregivers may change from week to week depending on work schedules, family relations, place of residence, or other changes in life circumstances. Flexibility in roles may be a strength or a problem for a family, determined by the family's ability to cope with change and the degree to which changing roles are structured to meet family needs.

A clear association has been established in the literature between social support and adult parent-child interaction, maternal adjustment, as well as adolescent educational achievement, economic independence, and long-term development of the child.[2,17] Studies indicate that the quality of mother-infant interaction,[19] the home environment,[20] and the mothering role[21] are enhanced especially by social support provided by the father, the family, and community professionals.[10,22,23]

Although "social support" is a generic term, it is a multidimensional construct that can be defined in terms of function, source, quantity, and satisfaction. The major functions of support include material (food, clothing), instrumental (child care), informational (parenting knowledge and feedback), and emotional support (discussion of problems and joys). The source of support ranges from informal contacts within family and friendship networks to formal contacts with community professionals. Most often, the teenage mother receives the four types of support primarily from her family and/or the baby's father, in terms of food, clothing or financial help, child care, parenting advice, and listening to problems. Similar types of support also may be provided differentially by friends, health care practitioners, educational personnel, and social service workers. Although research indicates the importance of social support for teenage mothers, rarely[21,23] has the adolescent been asked for her perceptions of the support she receives from the father, the family, and the professional community.

A recent topic of investigation is the role played by the father of the baby. Contrary to popular belief, the majority of infants born to teenagers are not fathered by adolescents. In 1983, at least 47 percent of the infants born to adolescent mothers in the United States were fathered by men over 20 years old.[24] The fact that many of these infants have adult fathers increases general expectations for paternal support and responsibility within the family. The limited evidence available suggests that fathers are more interested and involved with the adolescent mother and the child than has been assumed. Whether they share the same household, fathers may offer adolescent mothers financial or child-care assistance and emotional support.[22] These fathers deserve greater attention from researchers, practitioners, and policy makers than they have received.[18]

Aspects of Parenting

When considering factors that contribute to adolescent parenting it is important to address various aspects of the parenting experience. Three representative aspects are parent-child interaction, perceptions of parenting, and the home environment.

Parent-Child Interaction Clear associations have been demonstrated between adult parent-child interaction and the parent-child relationship, subsequent peer relations, and later cognitive, language, and social development.[25] Most observations of parent-child interaction indicate that, overall, teenage mothers demonstrate similar behaviors to those of adult mothers, but differ in a few specific areas. Teenagers tend to talk less, respond less, appear more passive, and sometimes appear less affectionate with their children than do adult mothers.[2,19] However, variability in adolescent behavior requires that each teenager be assessed individually for her strengths and needs in relation to her child and that other caregivers be considered when assessing the total caregiving environment of the child.

Perceptions of Parenting Although the literature on adolescent parenting provides no systematic information on adolescent mothers' perceptions of the

parenting experience, such as feelings of competence, stress, and self-efficacy, parental perceptions have shown salient effects in the adult parenting literature.[22,26] Information about perceptions of this type from adolescent mothers and other caregivers within the family would enable clinicians to better understand the unique roles, needs, and strengths within individual families.

Home Environment Another measure of parenting, albeit indirect, is the quality of the home environment in terms of its opportunities for the cognitive, social, and emotional development of the child. In an adolescent population, such an assessment may represent composite caregiving by the family. This is valuable data for the practitioner to combine with other parenting information in monitoring the health and well-being of the adolescent mother and child, given the strong relationships between home environment ratings in infancy and later cognitive development.[27]

The literature on adult parents suggests the value of taking a family perspective[22,26] (described above) before drawing conclusions about the caregiving environment within a family. The same suggestion seems appropriate for the adolescent mother and child. The mother's needs and roles are inextricably intertwined with those of her child, family, and quite possibly, the baby's father. Viewing the mother-child dyad apart from the social context results in a skewed picture of the adolescent mother's and child's health needs and resources.

Physicians' Roles

The challenge to physicians for the care of the adolescent mother and her infant is complex. Societal views of the adolescent parent as an emancipated minor have allowed provision of health care to the infant and family planning for the mother but have not adequately addressed the dual development of the adolescent as a person and a parent. The adolescent continues to hold a dependent position within the family and society, while the parenting adolescent is expected to function independently. A 17-year follow-up study of Baltimore teenagers revealed remarkably disparate profiles of personal adaptation to adolescent motherhood.[2] Providing health care services to this diverse group is best served by the development of several roles that incorporate a conscious awareness of both mother and infant within the social context and that address physical, cognitive, and psychosocial health needs.

These multifarious roles use clinical expertise and knowledge gained from physician-patient relationships in clinical practice. They also incorporate both developmental and family oriented perspectives. And, in keeping with the population served, the roles are dynamic rather than static, in that change is a natural product of growth and development. The physician is seen as service provider to the adolescent and her child within their family context, case manager for the mother-child dyad, and advocate for the development of services required to meet their unique needs.

Health Supervision and Health Education Research and clinical work with teenage mothers suggests the importance of attending to the psychological and behavioral characteristics of the adolescent as a person and a parent, in conjunction with those of the offspring. Experience with adolescent mothers suggests that health care providers address the adolescent's needs before focusing on her parental role and the needs of the infant.[9] The physician as teacher/learner and the adolescent as learner/teacher need to engage in an interactive process that allows them to assess health status and various roles the teenager holds as family member, student, worker, friend, mate, and mother. This information can serve as the foundation for a flexible plan to achieve a goodness of fit among the unique factors in her life. This assessment and decision-making process will facilitate the adolescent's development toward independent adult functioning.

In addition to the supervision of infant and maternal health, a key component of the physician's role in clinical practice continues to be patient education. Howard and Sater's[6] survey of adolescent mothers' perceptions of health care needs clearly demonstrated an awareness of the need for information. Specifically, mothers surveyed felt that it was important to know how to meet their own physical health needs as well as when to begin medical care for the baby, how to identify illness in an infant, and care-giving techniques for infants who are ill. Health education content for the adolescent mother beyond the immediate postpartum period incorporates not only information germane to her sexuality, sexual relationships, and routine health maintenance (nutrition, rest, exercise) but also provides parenting information on feeding, play, sleep patterns, child development, child health care, health promotion, and disease and injury prevention.[28]

The challenge in terms of meeting informational needs is complex. Adolescent mothers may have had negative experiences in traditional school settings where information was delivered via didactic methods with little concrete application to life circumstances or opportunity for discussion. Failure to achieve in the academic setting may have lowered self-esteem, increased the sense of failure, and lessened the sense of personal control. Careful attention must be given to the selection of educational materials that will optimize learning and to the manner in which they are presented. Physicians may chose to delegate the health education

component to a member of their office staff, refer the adolescent to a community agency, or do it themselves.

Case Management The second role of the physician caring for the adolescent mother and her infant is that of case manager for the array of services (social services, school, WIC, food stamps) required to meet physical, social, educational, and parenting needs. Case management can be effectively conducted through specific community resources or by the physician or member of the office staff.

Advocacy Physicians traditionally have served as advocates for health care services for mothers and children. It is within this role that impetus is given for development within communities of programs that recognize adolescents' unique needs (scheduling of appointments, transportation, adolescent parenting groups). The literature supports the adolescent mother's need for concrete financial help, baby sitting, and day care.[29] Advocacy may take the form of initiator, supporter, or collaborator for the development of new services reflecting unique adolescent and community needs. It may also require networking with others who provide care to adolescents to assure community participation and coordination of existing services and programs.

We believe the optimal time for assuming the parental role follows entry to adulthood, and consequently the prevention of adolescent pregnancy is of utmost importance. However, adolescent pregnancy and parenthood continue to be striking phenomena in the United States. Inherent in the multiple roles for physicians is the belief that comprehensive care will facilitate the teenage mother's development as a functional adolescent able to provide high-quality parenting for her infant within her particular social context.

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Adolescent Pregnancy Prevention

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Preventing unintended pregnancies in young teenagers can be accomplished by delaying the age of initiation of sexual activity and by effective use of contraception. Physicians can participate in adolescent pregnancy prevention through direct patient contact and interaction with other community programs. In the United States, school-based units and community programs have been associated with significant reduction in adolescent pregnancy rates.

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Adolescent pregnancy, which often has significant adverse consequences for teenage parents, for their offspring, and for society as a whole, has been identified as an important public health problem.[1] Of the 226 health objectives targeted by the Public Health Service for achievement by the year 1990[2] the following relate to adolescent pregnancy

- there should be almost no unintended births to girls 14 years of age and under
- the fertility rate for girls 15, 16, and 17 years of age should be reduced to 10 per 1000, 25 per 1000, and 45 per 1000 respectively.

Prevention is customarily divided into three components: primary prevention: health promotion and disease prevention; secondary prevention: early detection and prevention of full clinical manifestations; and tertiary prevention: measures to reduce impairment and disability, to minimize adverse effects, and to prevent complications. We address interventions aimed at primary prevention of adolescent pregnancy, which include interventions to encourage delayed initiation of sexual activity and interventions to encourage use of effective means of contraception by sexually active adolescents.

From studies of factors associated with early sexual activity and unintended pregnancy among adolescents[3–5] have come ideas for preventive measures: increase knowledge of reproductive function and contraceptive methods; enhance self-esteem, self-awareness, and assertiveness; improve interpersonal communication skills; improve decision-making skills, including the ability to deal with peer pressure; align personal values with those of family, church, and community; provide educational and vocational opportunities; strengthen parental knowledge, involvement, and communication.

Among medical professionals, as is true of the general public, there is a spectrum of attitudes toward adolescent pregnancy prevention ranging from the view that only abstention is an appropriate form of birth control for adolescents to acknowledgment that a multifaceted approach to the problem is required.

Consistent with their own beliefs and values, physicians have many opportunities to be instrumental in adolescent pregnancy prevention, both through direct patient care[6] and through interactions with other programs. Physicians who care for young people over a long period and have the opportunity to develop close relationships with children and their families may be in a unique position to act as role models and counselors. However, in a recent study[7] while compliance with contraception was better in a suburban private practice than in clinics serving lower socioeconomic groups, it was by no means optimal and the authors cautioned against "complacency" on the part of private providers.

Like other preventive measures, successful family planning depends on the patient's ability to act responsibly to improve his or her own health by altering behavior and therefore reducing risk. The physician assists in behavior change in three phases.[8] First the physician must assess the patient for both risk and readiness to change. This requires awareness of risk factors for the condition in question and time spent taking a careful history to ascertain the presence and degree of risk. Factors indicative of readiness to change include the patient's general concern for his or her health; the patient's knowledge, attitudes, and beliefs; the patient's perception of personal risk; the availability of cues to action; the existence of social supports; and the level of self-esteem.

The second role is to facilitate intervention. This task consists of counseling the patient regarding risk factors: providing education, helping to motivate the patient toward behavior change, and negotiation with the patient to decide on a course of action. The steps in this process include setting goals, developing skills, and establishing a system of feedback to enable the patient to maintain the new behavior. The final stage of intervention is follow-up and maintenance, a stage in which close supervision and appropriate feedback are critical for the patient to continue the new pattern of behavior.

While reproductive decision making is complex at any age, special considerations apply to adolescents. Physicians providing services to teenagers must take into account four major developmental tasks of adolescence:[9] separation-individuation, that is, the process of gaining independence from parents and other adults;

acquiring skills for economic independence; psychosexual differentiation; and identity formation.

Cognitive and problem-solving skills are usually achieved by the mid-teen years. The ability to reason abstractly is generally followed by an increasing capacity to be less self-centered and to recognize the consequences of one's actions. The adolescent patient must be assessed for his or her ability to be motivated by long-term *v* short-term consequences of behavior.

The path to completion of these developmental tasks is not necessarily smooth. The adolescent can be expected to try out various roles and to experiment with various patterns of behavior. Strasburger[10] points out that the two complex behaviors of teenage sexual activity and drug use share common ground in that they probably represent a constellation of acting-out behaviors in which certain teenagers feel compelled to engage; both are transition-marking behaviors whereby ties with family are loosened in favor of friends and independence and nonconventionality are prized. Attempts to discourage adolescents from experimentation may contribute to the very attractiveness of the behaviors involved. Some alternatives include minimization (limitation of experimentation to a moderate level), insulation (prevention of serious long-term consequences of experimentation), and delayed onset of experimentation until the teen is better able to handle the particular involvement.

Physicians may find useful such office educational aids as a new brochure for teenagers from the American Academy of Pediatrics and the American College of Obstetricians and Gynecologists[11] that incorporates several points of view and combines medical information with developmentally appropriate behavioral messages. The first bold-type statement is "You can postpone sex." The overall themes are: the choice is yours; you should know the consequences of your decision (pregnancy, sexually transmitted diseases, hurt feelings); it's okay to say "no"; if you intend to have sex there are effective contraceptives for young women and young men.

Many factors influence the reproductive behavior of adolescents: peers; sexual partners, family, church, school, the media, the health care system. The media, especially television, exert a powerful influence on today's teenagers. Sex on TV is "impersonal, emotionless, and exploitative,"[10] often offering unrealistic portrayals that are potentially harmful to young people. Similarly, numerous motion pictures during the last several years have had scenes that exploit teenage sexuality. Professional organizations have suggested guidelines for positive use of the media in promoting responsible sexual behavior.[12]

Providing information about pregnancy and birth control through formal sex education programs increases knowledge of human reproduction and methods of contraception. Sex education programs alone, however, do not appear to change either values or behavior.[13,14] Integrating sex education programs with a service component may be more effective, as seen in adolescent health programs located in or near schools. A number of advantages underlie this approach: the availability of a "captive audience" for educational programs, the potential for confidential services, the ability to use peer groups in a positive way, integration of family planning services with other health-care needs. Such school-based programs report substantial success in reducing pregnancy rates in their target populations.[15]

The traditional public health/preventive medicine approach determines risk factors, identifies possible interventions, and applies them to individuals at risk. Adolescent pregnancy, a problem that has multiple causal elements, may require a communitywide approach aimed at lowering the overall risk in the population.

A comprehensive program involving an entire community (parents, teachers, church and community leaders, and public school children) was directed toward the dual goals of reducing teenage sexual activity and decreasing the teen pregnancy rate.[5] The individual components of the program were not unique; rather the innovative aspect was the multilateral communitywide involvement. A significant reduction in the pregnancy rate among 14- to 17-year-olds was attributed to the program.

Ethical Issues

Reproductive behavior is an arena of life in which self-determination is highly valued by patients and health-care providers alike. The latter are admonished to provide nondirective counseling about choices and options, imparting information but remaining detached from the decision-making process.

This seems problematic when dealing with adolescents. While biological maturity and therefore reproductive capability occurs by the mid-teen years or even sooner, our society requires its young people to undergo significant education and training before they achieve final economic and social independence. Ought we to regard them as mature and self-directed concerning their own sexuality or as still-growing children who require rules and regulations? The adolescent may not always be able to answer this question. In a recent study of compliance with prescribed oral contraceptives, the most successful contraceptors were the adolescent women who expected and received "authoritative guidance," that is, the most directive counseling.[16]

Progress and Prospects

Review of progress in mid-decade toward the national public health objectives for 1990 indicated that age-specific birth rates for 14- to 17-year-olds have remained essentially constant.[17] Problems in achieving further reduction of fertility rates in young teenagers were identified as:

- Controversy about the content and timing of sex education programs for children.
- Controversy about aggressive promotion of contraceptives because of the possibility that sexual activity may be encouraged.
- Acknowledgment that teenagers are not "good contraceptors"; over half do not use contraceptives at first intercourse and the time from first intercourse to an initial visit for contraceptive services is about one year.

What can we in the United States learn from the experience of other developed countries? The 37-country study carried out by the Alan Guttmacher Institute[18] indicated that the cornerstone of a successful adolescent pregnancy prevention program is an unambiguous government policy geared not toward decreasing sexual activity but toward pregnancy prevention. Governments of countries with the lowest teenage pregnancy rates have made a serious extended effort to help sexually active young people avoid unintended pregnancy and child-bearing.

Successful approaches observed in these countries included upgrading the family planning clinic system to provide free or low-cost contraceptive services to all teenagers who want them and publicizing the fact that these services are not limited to the poor; establishment of special adolescent clinics including clinics associated with schools to provide confidential contraceptive services as part of general health care; encouraging local school districts to provide comprehensive sex education programs, where possible closely integrated with family planning clinic services; relaxation of restriction on distribution and advertising of nonprescription contraceptives especially the condom; dissemination of more realistic information about the health benefits as well as the health risks of the pill.

Postscript for the Late 1980s

No discussion of sexual behavior today is complete without mention of acquired immunodeficiency syndrome (AIDS). The eventual impact of the AIDS epidemic on sexual activity among teenagers is difficult to predict. Surely, recognition of this new risk will influence counseling and education as well as individual choices. Currently available contraceptive options for adolescents have been reviewed recently.[19] The oral contraceptive has been a popular choice among adolescent women.[7] The condom is being heavily promoted for AIDS prevention; will teenagers respond to this message, and if so, will there be any effect on the adolescent pregnancy rate?

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The Physician and Community Resources: Services for the Pregnant Adolescent

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Because physicians generally are perceived as highly credible sources of information and referral, we support their efforts by detailing the information and service resources available in the community to meet the myriad needs of the young parturient.

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Adolescence is a complex developmental stage involving a multitude of changes and conflicts. The emergence of sexuality and a sexual identity is accompanied by psychosocial maturation, personal identity formation, and other physiological changes. The occurrence of a pregnancy and the resolution of that event, perhaps resulting in early parenthood, accelerates a young woman's transition to adulthood while posing a significant challenge to her physical, emotional, and psychosocial well-being. Physicians and other health professionals are a likely point of contact for these young women. As such, they are in a unique position not only to provide the high-quality reproductive health care necessary to meet the particular medical needs of this group but also to foster a supportive and trusting relationship with an adult, which many young adolescents desperately need.

The multifaceted problems faced by pregnant and parenting adolescents require a comprehensive approach including personal health services; health, family life, and nutrition education; financial assistance; education and vocational training; day care services; and supportive counseling. While appropriately used prenatal and pediatric services can diminish risks to mother and child, such medical care may be compromised when provided without sufficient attention to the financial, psychological, developmental, and educational needs of the young mother and her infant. An alert and sympathetic physician can have a tremendous influence on adolescent patients, the outcome of their pregnancies, and the healthy development of their infants by encouraging these young women to participate in other community support services that can minimize the many problems they may encounter.

The list of resources available to assist health care providers and their adolescent patients should convey to the reader not only the complexity of the problem but also the extent of the community response to the needs of the adolescent. This complex web of services may often seem impenetrable to a young woman. Her familiarity with the health care system may lead her to seek medical services without attempting to identify and acquire other supportive services. The physician can play a critical role in assuring that the young woman is provided with developmentally appropriate information, is made aware of services available to her, and is encouraged to comply with recommendations and referrals made to her by her health care team. The rewards for providing this crucial supportive function are potentially enormous. The outcome of the adolescent pregnancy and of the future of the child may be improved if all available resources can be brought to bear on this event in a timely, coordinated fashion.

The following resources are in a directory format organized in two broad sections:

- Community Services and Patient Information Resources
- Professional Information

Many entries cited were drawn from materials developed by the National and the Maryland Healthy Mothers, Healthy Babies Coalitions. These coalitions represent an alliance of public and private agencies with a common interest in promoting maternal and child health. Activities include promotion of public awareness and education in preventive health habits for women and their families, development of networks for sharing information among groups concerned with these issues, and development and distribution of public and professional educational materials on topics related to improving maternal and child health. Nationally produced items include *The Healthy Mothers Directory of Education Materials*, a series of Fact Sheets on Adolescent Pregnancy, and A Compendium of Program Ideas for Serving Low-Income Women, which includes a specific section on Adolescent Pregnancy. Materials produced locally include *Moms Like You: A Magazine for Teen-Mothers-To-Be*; a series of publications related to prenatal care, *Take Care of Your Baby Right From the Start*; and a poster, *Warning Signs of Preterm Labor*. All these materials and further information about the Coalition can be obtained by writing the Maryland Coalition for Healthy Mothers, Healthy Babies, Inc., P.O. Box 2015, Baltimore, MD 21203-2015.

Community Services and Patient Information Sources

Maryland Public Agencies

1. Department of Economic and Community Development The Job Training Partnership Act (JTPA) provides federal funds to states to establish local job-training programs to prepare disadvantaged youth for entry into the labor force. In Maryland, local agencies have responsibility to address the needs of youth through projects established through JTPA funds. A pilot project is under way in Frederick County to provide training in employability and life skills and to provide special support to teen members of AFDC families and to pregnant and parenting teens. If successful, it will be made available to other local employment agencies. The agency's Research and Analysis Division also provides a wealth of labor market, occupational, wage, and career selection information. Referrals or information requests should be made to the program office at 301–333–7089 or by calling the local agency contact person listed in the Table.

2. Department of Health and Mental Hygiene The Department provides a variety of services designed to address the health, economic, and case management needs of pregnant and parenting adolescents through its 24 local health departments and several state-funded clinics.

Adolescent Case Coordinators, located within each local health department, are responsible for PWI/OBRA and/or PAP certification. (These programs are described below). They also serve in a case-management capacity to assist pregnant teens and at-risk teens obtain needed health and social services. These Case Coordinators can be reached at the local health department numbers provided in the Table.

Early Periodic Screening Diagnosis and Treatment (EPSDT) program provides comprehensive health care for Medicaid-eligible children from birth to age 21. These services are offered in a variety of settings including public clinics, HMOs, and private physician offices. Information on becoming an EPSDT provider or referring a child in need of these services is available from the EPSDT Program office at 301–225–1485 or your local health department.

Maryland Family Planning Program supports a network of family planning clinics throughout the state. Many of these clinics have special teen walk-in clinics or offer appointments after regular school hours. Further information is available from the local health department.

Pregnant Women and Infants Program (PWI), often referred to as the Omnibus Budget Reconciliation Act of 1986 (OBRA), allows states to provide medical services to indigent pregnant women, infants, and children who do not meet the requirements of any other Medical Assistance (Medicaid) category and whose family income does not exceed 100 percent of the federal poverty level. In Maryland, pregnant women of all ages and infants up to one year old are covered under this program. Any health care provider who sees a patient potentially eligible for this program should be aware of the issues:

- PWI contains a "presumptive eligibility" provision that allows a pregnant woman to receive temporary Medicaid benefits for 45 days, at no risk, while her ultimate eligibility is determined.
- Eligibility determination is the responsibility of the local health department, community health centers and subgrantees of the Baltimore City Health Department (telephone numbers listed in the Table). Physician referral to this program must be made through one of these agencies.

Prenatal Assistance Program (PAP) provides limited health insurance to pregnant women under age 21 with individual incomes below 100 percent of the federal poverty level. This program is available to assist those adolescents in need of medical care but deemed ineligible for Medicaid and OBRA. PAP includes prenatal and postpartum care up to six weeks, delivery fees, and EPSDT visits for infants for their first three months. Like PWI/OBRA, eligibility for PAP is determined by the local health department. Further information about these programs can be obtained by calling the program office at 301–225–6538 or your local health department clinic.

Project KISS (Kids in Safety Seats) develops and distributes materials on the proper and consistent use of car safety seats; conducts in-service educational programs for professionals, public education programs, and media campaigns; oversees the operation of car seat loaner programs designed to assist low-income families; sponsors the Maryland Child Passenger Safety Association; and conducts evaluation studies of safety seat and seat belt use by children and pregnant women. Physician referral and information requests should be made to the program office at the Department of Health and Mental Hygiene, 300 West Preston St., 4th floor, Baltimore, MD 21201 (301–225–1376).

Supplemental Feeding Program for Women, Infants, and Children (WIC PROGRAM) provides nutrition education, health-care referrals, and monthly supplies of supplemental food to pregnant and postpartum women, infants, and children up to age five, who are determined to be at economic and nutritional risk. Physician referrals can be made through the WIC Program in each local health department. Telephone numbers are in the Table.

3. Department of Human Resources The Department, through its local Departments of Social Services provides both financial and direct service resources to pregnant and parenting adolescents and their families. Financial assistance includes Aid to Families with Dependent Children (AFDC) available to single parents meeting financial eligibility criteria; the Food Stamp program and certification for Medical Assistance, available to all AFDC recipients; and General Public Assistance for Pregnant Women not otherwise eligible for AFDC.

Direct service programs include Single Parent Services available to youth under age eighteen who are pregnant, parenting, or at risk of pregnancy to provide assistance to adolescents and their families as well as consultation to and activities with local community groups and organizations; Adoption Assistance; and Child Protective Services to which reports of suspected child abuse or neglect should be made. Physician refer-

Table. Public Agency Telephone Numbers by County

County	Health	Social Srvs	Education	Employment
Allegany	777–5600	777–5500	759–2002	777–1221
Anne Arundel	841–6750	269–5490	224–5320	224–1319
Baltimore City	396–4663	361–2222	396–6685	396–9517
Baltimore	494–3740	494–2520	494–4210	494–3648
Calvert	535–5400	535–4700	535–1700	xxxxxxxx
Caroline	479–0556	479–4628	479–1460	822–1716
Carroll	876–2152	848–8880	848–8280	876–3484
Cecil	398–5550	398–1414	398–0400	939–4240
Charles	934–9577	934–2700	932–6610	870–1093
Dorchester	228–3223	228–5100	228–4757	228–1093
Frederick	694–1700	662–6151	694–1052	694–9480
Garrett	334–8111	334–9461	334–8121	359–9480
Harford	838–3047	836–4700	838–7300	939–4240
Howard	992–2333	461–0329	992–0500	922–2183
Kent	778–1350	778–0820	778–1595	822–1716
Montgomery	251–7470	468–4314	279–3106	279–2046
Prince George's	386–0279	422–0400	952–3900	350–9760
Queen Anne's	758–0720	758–0440	758–2403	758–0558
St. Mary's	475–8921	475–3051	863–7495	863–6681
Somerset	651–0822	651–0311	651–1616	632–3300
Talbot	822–2292	822–1617	822–0330	822–1716
Washington	791–3200	791–4030	791–4183	791–3164
Wicomico	749–1244	543–6900	742–5128	632–3300
Worcester	632–1100	632–2705	632–2582	632–3300

Health: Adolescent Case Coordinator, WIC Program, PWI/OBRA and PAP eligibility determination, Prenatal Assistance Program, Family Planning, Prenatal Care Services, Well-Child Care (some counties have multiple offices)

Social Services: Single Parent Services, AFDC, Food Stamps, Medical Assistance Certification, Protective Services, Adoption Assistance, Child Support Enforcement Service (some counties have multiple offices)

rals or requests for information can be made through the Local Department of Social Services located in each county. Telephone numbers are listed in the Table.

4. Maryland State Department of Education The Department of Education, through its local education administrations, provides support services to pregnant and parenting adolescents through pupil personnel workers and guidance counselors located in each county. (In Baltimore City this individual is referred to as a school social worker). Each county adheres to a bylaw stating that every pregnant teen has a right to continue her education; various options are available to any young girl who for medical reasons cannot attend regular school classes.

Schools also work with individual adolescent mothers to encourage and assist them in continuing their education. Every school in Maryland also has access to a school health nurse who may be able to provide supportive services to the adolescent and also can serve as a resource to the private physician serving the adolescent in the community. Any physician can make a referral regarding a particular student or request further information from the pupil personnel worker at the county level. Telephone numbers are listed in the Table.

5. Maryland's Family Support Centers These community based, locally operated drop-in centers focus on prevention of the problems of adolescent parenting before they occur. These centers target the parents of 0 to 3-year-olds to help them develop skills and self-esteem to enhance their parenting capabilities. Each center offers either directly or through a community referral system parenting enhancement programs, health care, family planning and reproductive counseling, developmental assessments, temporary child care, peer support activities, educational services, and job preparation skills. The program is administered by **Friends of the Family,** 2539 St. Paul St., Baltimore, MD 21218 (301-467-2556). Maryland's six family support centers are located in three Maryland subdivisions at the following locations:

Baltimore City

Freedom Center, 213 North Chester St., Baltimore, MD 21231 (301–732–5998).

Our House 2655 Round Rd., Baltimore, MD 21225 (301–396–8469).

Teen Parenting Enrichment Program, 1234 Druid Hill Ave., Baltimore, MD 21217 (301–728–7878).

Waverly Family Center, Inc., 901 Montpelier St., Baltimore, MD 21218 (301–235–0555).

Anne Arundel County

The Parenting Place of Annapolis, President and Monroe Sts., Annapolis, MD 21401 (301–841–6750 X1793).

Prince George's County

The Family Connection, 3201 Rhode Island Ave., Mt. Rainier, MD 20712 (301–927–2277).

Two additional Family Support Centers, one in Dorchester County and one in Western Maryland are expected to open by late 1987. Call Friends of the Family for more information.

Local Community Agencies

Several local affiliate offices of national organizations as well as state-based organizations produce materials, serve as a referral source, or provide services for specific conditions related to the alleviation of problems associated with adolescent pregnancy and parenting.

American Lung Association of Maryland, 1301 York Rd., Suite 703, Lutherville, MD 21091 (301–494–1100). Provides resources for the public on quitting smoking, risks of smoking in pregnancy, and a new self-help manual, *Freedom from Smoking for You and Your Baby*; also produces materials for professionals on how to counsel pregnant smokers.

Baltimore's Best Babies, 420 North Caroline St., Baltimore, MD 21205 (301–396–9439). A physician-referred home-visiting program for pregnant women and their children up to one year postpartum. Serves as an adjunct to ongoing public or private prenatal care. Provides coordination and link with other existing community resources as well as necessary education in health, safety, hygiene, and child care. Over 40 percent of the program's clients are adolescents.

Baltimore Urban League, Inc., 1150 Mondawmin Concourse, Baltimore, MD 21215 (301–523–8150). Targets male adolescents with educational information on preventing adolescent pregnancy and on other issues of sexuality and sexual responsibility. Produces a program development guide and related materials entitled *Don't Make a Baby if You Can't Be a Father.*

Center for Infant Study, University of Maryland, Howard Hall, Room 132, 660 West Redwood St., Baltimore, MD 21201 (301–328–2485). The Center is a mental health program for infants under age three and their parents or family members. It offers testing and diagnostic assessments, clinical services, training for professionals, interagency consultation, and research projects.

Childbirth Education Association of Baltimore, 11 West Pennsylvania Ave., Towson, MD 21204 (301–321–1602). Provides information, tools, and techniques for coping with labor and delivery. Offers information and prenatal education classes on site and at various locations in the community; several are targeted at teenagers. Also offers breastfeeding counseling and support.

Child Study Association of Maryland, Inc. 1004 Reisterstown Rd., Baltimore, MD 21208 (301–653–3555). Sponsors professionally led parent discussion groups meeting monthly in members homes or community centers; provides parents with a support network, education, and reinforcement while rearing their families. Focuses on special needs of individual members including those of adolescent parents.

Crisis Pregnancy Center of Baltimore, 12 East 21st St., Baltimore, MD 21218 (301–625–0102). Provides free pregnancy testing, abortion and parenting option counseling, free donated maternity clothing and items for the baby for young mothers in need of such items, and support and assistance in securing other needed resources including housing. Also operates a hotline for clients.

Exchange Club for the Prevention of Child Abuse in Maryland, 1310 South Charles St., Baltimore, MD 21201 (301–576–2414). Provides services to families with children under age 11 who are in or at-risk of an abusive situation. The program matches volunteers with families who then befriend the family, serve as lay therapists, teach parenting skills, and provide referrals to other needed services. Services are free and are extended to adolescent parents meeting the above criteria.

Family and Children's Services of Central Maryland, 204 West Lanvale St., Baltimore, MD 21202 (301–669–9000). Provides a range of adoption services including free pregnancy counseling for women considering adoption, family and father involvement, medical assistance referrals, immediate adoption placement, or temporary foster care for the infant while the adoption decision is being made. For young women who choose to parent their children, individual counseling for single parents focusing on issues of parenting is offered on a sliding-fee scale.

First Call for Help, The Health and Welfare Council, 22 South Light St., Baltimore, MD 21201 (301–685–0525). Serves as a one-stop information and referral service for the general public and professionals. Also serves as a teen hotline providing health, social services, and other information and assistance to adolescents. (Outside Baltimore call 1–800–492–0618.)

Florence Crittendon Services, 3110 Crittendon Place, Baltimore, MD 21210 (301–366–4333). Florence Crittendon is a residential home for adolescent girls aged 13 to 17 who are having problems in the home or community or who are in an abusive situation. The girls may or may not be pregnant; those who are pregnant may stay until their delivery. There is a monthly fee assessed on a sliding scale. Clients receive social work services; individual, group, and family counseling; recreational programs; and medical care through Sinai Hospital.

Governor's Council on Adolescent Pregnancy, 1123 North Eutaw St. Room 201, Baltimore, MD 21201 (301–333–7948). The Council, created as a direct result of the Governor's Task Force on Teen Pregnancy, is charged with reducing adolescent pregnancies in the state. (See article page 911.)

Interdepartmental Committee on Adolescent Pregnancy, Parenting, and Pregnancy Prevention. Established in 1984 to foster interagency cooperation and coordination to prevent teenage pregnancy when possible and to provide needed services when teenage pregnancy and parenting occur. The committee holds a statewide conference each November, implements a program of incentive grants to local interagency committees, and develops and distributes a networking guide on teenage pregnancy and parenting programs in Maryland. For further information call (301–333–2819).

La Leche League of Maryland and Delaware, 9684 Oak Hill Dr., Ellicott City, MD 21043 (301–995–3726). Provides information and support to breast-

feeding mothers. Also available to assist health care providers to assist their patients in breast-feeding. Issues several manuals, literature reprints, and patient information materials.

Laurence G. Pacquin Junior-Senior High School, 2200 Sinclair Lane, Baltimore, MD 21213 (301–396–9398). The Pacquin school is a regular comprehensive school serving pregnant adolescents. The young women must be enrolled in other city schools to be accepted into the program and must return to their schools of origin following delivery. In addition to the regular course of study for junior and senior high school students, the school offers pregnancy and parenting classes.

March of Dimes Birth Defects Foundation, Greater Baltimore Chapter, 15 Charles Plaza, 3rd Floor, Baltimore, MD 21201 (301–752–7990); Lower Shore Chapter, P.O. Box 651, Salisbury, MD 21801 (301–546–2241); National Capital Area Chapter, 2700 South Quincy St., Suite 220, Arlington, VA 22206 (703–824–0111). The overall mission of the March of Dimes is to prevent birth defects through programs of research, medical services, and education. For further information on these programs and the availability of professional and public education materials, see the accompanying article in this issue by Beverly S. Raff PhD, page 971.

Maryland Committee for Children, 608 Water St., Baltimore, MD 21201 (301–752–7588). Operates LOCATE, a child care resource and referral service; conducts parent education programs; and provides consultation services to prospective and existing day care centers. Also provides a resource library of literature in child development, a job placement service for prospective child care personnel, and a recycling center for discarded and excess materials that serve as unique, low-cost educational materials.

Parent Child Stress Center, 118 North Howard St., Suite 608-A, Baltimore, MD 21201 (301–396–4560). Provides free-of-charge, family, individual, and group counseling; parenting education classes; and information and referral services to families in crisis, experiencing disruptive behavior, or in need of basic supportive services. The goals of the program are to reduce and prevent delinquency in school-age children by intervening with the family early on, to stabilize the family unit by working with parents to improve communication and parenting skills, to assist in the development of positive coping mechanisms for stress. Special classes for teen parents are also available.

Parents Anonymous, 1123 North Eutaw St., Suite 312, Baltimore, MD 21201 (301–728–7021), or a 24-hour hotline number (301–243–7337). Provides self-help support groups for parents under stress who are abusive or at risk of becoming abusive to their children. Weekly sessions are held at various locations in Baltimore City, Baltimore County, and Prince George's County. All sessions are free-of-charge, facilitated by a volunteer mental health professional, and offer free child care. A teen parent group is being run in Prince George's County on a pilot basis. Adolescent parents are welcome at any of the group sessions.

Planned Parenthood of Maryland, 610 North Howard St., Baltimore, MD 21201 (301–576–1400). Clinic services provided on a sliding-fee scale include annual gynecologic exams, diagnosis and treatment of infections, pregnancy testing, pregnancy termination services, sterilization, cancer screening for women, and counseling. Contraceptive services are provided free of charge to women less than 18 years of age. Planned Parenthood also provides, upon request, education and training programs and materials on various topics relating to human sexuality from parent-child communication to AIDS. Also operates "Private Line", a free public service featuring over 50 recorded health messages.

Professional Information

Many national organizations interested in promoting maternal and child health, recognizing the particular needs of adolescents and the medical professionals who serve them, have developed informational materials describing the specific nature of adolescent pregnancy and various appropriate medical approaches. The following list describes many of these publications as well as information on how to obtain them. Unless otherwise indicated, all materials are free.

• ***Adolescent Perinatal Health: A Guidebook for Services,*** The American College of Obstetricians and Gynecologists. Presents clinical guidelines concerning appropriate services for adolescents to inform and assist physicians, concerned individuals, and organizations encountering adolescents in need of services in their communities. (Pamphlet, 40 pages, revised edition, 1985, single copy free from the ACOG Resource Center, 600 Maryland Ave. SW, Suite 300 East, Washington, DC 20024).

• ***Adolescent Pregnancy Prevention Clearinghouse.*** The Children's Defense Fund. Publishes six in-depth reports each year on specific aspects of teen pregnancy and effective methods of stemming too-early pregnancy. A one-year subscription ($17.95) can be obtained by writing the Children's Defense Fund, 122 C St. NW, Washington, D.C. 20001.

• ***Compendium of Resource Materials on Adolescent Health,*** National Maternal and Child Health Clearinghouse. Provides a manual for practitioners and administrators faced with the challenge of meeting the health needs of adolescent populations. The compendium focuses on six areas: physical growth and development, psychosocial growth and development, nutrition, sexuality, health concerns, and administrative issues. Each section contains summary presentations, outlines, articles, bibliographies, and sample forms. (183 pages, single copy free from the National Maternal and Child Health Clearinghouse, 38th and R Sts., Washington, DC 20057 (202–625–8410).)

• ***Drug Abuse and Pregnancy,*** The American College of Obstetricians and Gynecologists. Single copy free, ACOG Technical Bulletin Number 96, September 1986, from the ACOG Resource Center, 600 Maryland

Ave. SW, Suite 300 E, Washington, DC 20024.

• ***Drugs and Pregnancy: Its Not Worth the Risk,*** The American Council for Drug Education. Professional education booklet, single copy $3 plus postage and handling. Patient education pamphlet, up to 99 copies $.25 each, plus postage and handling available from the American Council for Drug Education, 5820 Hubbard Dr., Rockville, MD 20852 (301–984–5700).

• ***Early Childbearing by Young Mothers,*** Child Welfare League of America. An intensive three-year study of young and mostly unwed mothers; examines the physical, social, and emotional problems unwed mothers experience in caring for their children. (Book, 186 pages, ISBN 0-87868-138-8, Stock # 1388/YF-1; $9.95 + $1.50 postage, from the CWLA, CN 3103, 300 Raritan Center Parkway, Edison, NJ 08818).

• ***Improving Family Planning Services for Teenagers,*** National Clearinghouse for Family Planning Information. Discusses effective strategies for delivering family planning services to teenagers. This report of an evaluation study of family planning services contains recommendations for improving program effectiveness. (129 pages, single copy free from the National Clearinghouse for Family Planning Information, P.O. Box 10716 Rockville, MD 20852).

• ***A Manual on Providing Effective Prenatal Care Programs for Teens,*** The Children's Defense Fund. Examines the problem of teenage pregnancy and its consequences, the effectiveness of prenatal care, the barriers that prevent pregnant women from receiving prenatal care, and the building and financing of effective prenatal care programs. (Book, 90 pages, $7.95, from the Children's Defense Fund, 122 C St. NW, Washington, DC 20001).

• ***Our Youngest Parents: A Study of the Use of Support Services by Adolescent Mothers,*** Child Welfare League of America. This nationwide study of 185 teenaged, unwed mothers centered on what help they used and what they needed. (Book, 96 pages, ISBN 0-87868-144-2, Stock # 1442/FY-2, $6.50 + $1.50 postage, from the CWLA, CN 3103, 300 Raritan Center Parkway, Edison, NJ 08818).

• ***Reaching Out to the Pregnant Teenager,*** U.S. Department of Agriculture, Food and Nutrition Services. A collection of resource materials designed to assist health, food assistance, and other related programs to tailor their nutrition education services to the special needs, interests, and life-styles of pregnant teenagers. (Resource package, single copy free, order number FNS-247 from the Nutrition and Technical Services Division, USDA, FNS, Park Office Center, 3101 Park Center Dr., Alexandria, VA 22302).

• ***Risking the Future: Adolescent Sexuality, Pregnancy and Childbearing,*** National Research Council. Reviews existing research on factors affecting the initiation of sexual intercourse, contraceptive use, pregnancy and pregnancy resolution, and the consequence of teenage pregnancy, childbearing, and parenting for young mothers, fathers and their children as well as the costs and effects of policies and programs. (Two volumes, 1987, Stock Code FUTURE, $21.95 and POD242, $40.95, from the National Academy Press, 1201 Constitution Ave. NW, Washington, DC 20418).

• ***Series of Pamphlets on Maternal Nutrition,*** American College of Obstetricians and Gynecologists. ***Assessment of Maternal Nutrition,*** single copy, $3; ***Eating Habits Questionnaire,*** 100 copies, $7 including postage and handling; ***Healthy Mothers, Food Wheel,*** up to 100, $.50 each; up to 1000, $.45 each plus $2 postage and handling from the American College of Obstetricians and Gynecologists, 600 Maryland Ave. SW, Suite 300 E, Washington, DC 20024.

• ***Standards for Services for Pregnant Adolescents and Young Parents,*** Child Welfare League of America. Describes goals for service for pregnant and parenting adolescents in the areas of social work, health, residential and comprehensive community based systems. Also provides a selected reference list. (Book, 73 pages, ISBN 0-87868-270-8; $12.50 including postage, from the CWLA, CN 3103, 300 Raritan Center Parkway, Edison, NJ 08818).

• ***Working With Teen Parents: A Survey of Promising Approaches,*** Family Resource Coalition. Describes 40 programs serving teenagers; provides insight into the interventions that make positive differences in the experiences of adolescent parents, disseminates new ideas about programming and service approaches, serves as a resource guide for those planning services. (Book, 139 pages, $12.50 available from The Family Resource Coalition, 230 North Michigan Ave., Suite 1625, Chicago, IL 60601 (312–726–4750).

Several national organizations address issues involved in adolescent pregnancy and parenting within the scope of their broader program missions. A few such organizations are listed here as additional sources of information potentially useful to physicians treating adolescents and their families in the community.

American Academy of Pediatrics, 141 Northwest Point Blvd., Elk Grove Village, IL 60007 (800–433–9016). Produces and disseminates a variety of patient educational materials targeted at adolescents covering topics such as drug use, pregnancy prevention, sex education, depression, motor vehicle safety, and sexual abuse. Also provides professional reports and statements on various topics related to adolescent health. A free publications and services catalog is available from the above address.

Center for Population Options, 1012 14th St. NW, Washington, DC 20005 (202–347–5700). The focus of the Center is teen pregnancy prevention. Patient education materials for teens; materials, workshops, and training programs designed to assist family planning and school-based clinics improve their services for adolescents; and annual fact sheets on the topic of adolescent pregnancy prevention are all available from the Center's Resource Center. A publications list and training calender are available from the Resource Center at the above address.

National Committee for Adoption, Suite 326, 1346 Connecticut Ave. NW, Washington, DC 20036 (202–463–7563). A national network of agencies and individuals working to promote adoption as a positive family building option. Provides information and publications on adoption and maternity services.

Selected Federal Health Information Clearinghouses

The federal government operates a number of clearinghouses that focus on a particular topic. Their services vary but may include publications, referrals, or answers to consumer and professional inquiries. All the clearinghouses described here respond to requests and provide free information to health professionals and the general public.

Clearinghouse on Child Abuse and Neglect, P.O. Box 1182, Washington, DC 22013 (301–251–5157). Collects, processes, and disseminates information on child abuse and neglect.

Food and Nutrition Information Center, National Agriculture Library Building, Room 304, Beltsville, MD 20705 (301–344–3719). Serves the information needs of professionals interested in nutrition education. Acquires and lends books, journal articles, and audiovisual materials.

Health Information Center, P.O. Box 1133, Washington, DC 20013 (800–336–4797). Serves as a central source of information and referral for health questions. Maintains a database containing descriptions of health-related organizations and programs throughout the country. Publishes a directory of health information resources, series of topical resource guides, and other publications. Information includes descriptions of the major organizations in the maternal and child health field.

National Clearinghouse for Alcohol and Drug Information, P.O. Box 2345, Rockville, MD 20852 (301–468–2600). Gathers and disseminates current information on alcohol-related subjects. Distributes a variety of publications on alcohol abuse including *My Baby Strong and Healthy*, DHHS Pub. # ADM 86-1436.

National Clearinghouse for Drug Abuse Information, P.O. Box 416, Kensington, MD 20795 (301–443–6500). Collects and disseminates information on drug abuse. Produces information materials on drugs, drug abuse and prevention.

National Center for Education in Maternal and Child Health, 38th and R Streets, Washington, DC 20057 (202–625–8400). Responds to requests for information about maternal and child health. Publishes a variety of guides, directories, bibliographies, and newsletters. Maintains a resource center for educational materials available to the health professional.

National Clearinghouse for Family Planning Information, P.O. Box 10716, Rockville, MD 20852 (301–770–3662). Promotes the exchange of family planning information among service providers, family planning consumers, and educators. Publishes fact sheets, bibliographies, the *Health Education Bulletin*, the *Information Services Bulletin*, the *Catalog of Family Planning Materials*, and the *Directory of Family Planning Grantees and Clinics*.

Office of Cancer Communications, Cancer Information Service, National Cancer Institute (800–422–6237). Maintains a hotline for cancer information. Also produces and disseminates materials including the patient education booklet, *Quit for Good*. Up to 50 copies are available free.

Office on Smoking and Health, Department of Health and Human Services, Technical Information Center, 5600 Fishers Lane, Room 116, Rockville, MD 20852 (301–443–1690). Answers inquiries and maintains a database of scientific information. Technical information includes current research on the effects of smoking on birth weight, fetal growth, infant mortality, and breastfeeding. Provides free patient education pamphlets including *Pregnant? That's Two Good Reasons To Quit Smoking*, DHHS Pub. No. (PHS) 83-50198.

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WARNINGS

1. ***Cardiac Conduction.*** *CARDIZEM prolongs AV node refractory periods without significantly prolonging sinus node recovery time, except in patients with sick sinus syndrome. This effect may rarely result in abnormally slow heart rates (particularly in patients with sick sinus syndrome) or second- or third-degree AV block (six of 1,243 patients for 0.48%). Concomitant use of diltiazem with beta-blockers or digitalis may result in additive effects on cardiac conduction. A patient with Prinzmetal's angina developed periods of asystole (2 to 5 seconds) after a single dose of 60 mg of diltiazem.*
2. ***Congestive Heart Failure.*** *Although diltiazem has a negative inotropic effect in isolated animal tissue preparations, hemodynamic studies in humans with normal ventricular function have not shown a reduction in cardiac index nor consistent negative effects on contractility (dp/dt).*
   Experience with the use of CARDIZEM alone or in combination with beta-blockers in patients with impaired ventricular function is very limited. Caution should be exercised when using the drug in such patients.
3. ***Hypotension.*** *Decreases in blood pressure associated with CARDIZEM therapy may occasionally result in symptomatic hypotension.*
4. ***Acute Hepatic Injury.*** *In rare instances, significant elevations in enzymes such as alkaline phosphatase, CPK, LDH, SGOT, SGPT, and other symptoms consistent with acute hepatic injury have been noted. These reactions have been reversible upon discontinuation of drug therapy. The relationship to CARDIZEM is uncertain in most cases, but probable in some. (See PRECAUTIONS.)*

PRECAUTIONS
General. *CARDIZEM (diltiazem hydrochloride) is extensively metabolized by the liver and excreted by the kidneys and in bile. As with any new drug given over prolonged periods, laboratory parameters should be monitored at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic function. In subacute and chronic dog and rat studies designed to produce toxicity, high doses of diltiazem were associated with hepatic damage. In special subacute hepatic studies, oral doses of 125 mg/kg and higher in rats were associated with histological changes in the liver which were reversible when the drug was discontinued. In dogs, doses of 20 mg/kg were also associated with hepatic changes; however, these changes were reversible with continued dosing.*

Drug Interaction. *Pharmacologic studies indicate that there may be additive effects in prolonging AV conduction when using beta-blockers or digitalis concomitantly with CARDIZEM. (See WARNINGS.)*

Controlled and uncontrolled domestic studies suggest that concomitant use of CARDIZEM and beta-blockers or digitalis is usually well tolerated. Available data are not sufficient, however, to predict the effects of concomitant treatment, particularly in patients with left ventricular dysfunction or cardiac conduction abnormalities. In healthy volunteers, diltiazem has been shown to increase serum digoxin levels up to 20%.

Carcinogenesis, Mutagenesis, Impairment of Fertility. *A 24-month study in rats and a 21-month study in mice showed no evidence of carcinogenicity. There was also no mutagenic response in in vitro bacterial tests. No intrinsic effect on fertility was observed in rats.*

Pregnancy. *Category C. Reproduction studies have been conducted in mice, rats, and rabbits. Administration of doses ranging from five to ten times greater (on a mg/kg basis) than the daily recommended therapeutic dose has resulted in embryo and fetal lethality. These doses, in some studies, have been reported to cause skeletal abnormalities. In the perinatal/postnatal studies, there was some reduction in early individual pup weights and survival rates. There was an increased incidence of stillbirths at doses of 20 times the human dose or greater.*

There are no well-controlled studies in pregnant women; therefore, use CARDIZEM in pregnant women only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. *Diltiazem is excreted in human milk. One report suggests that concentrations in breast milk may approximate serum levels. If use of CARDIZEM is deemed essential, an alternative method of infant feeding should be instituted.*

Pediatric Use. *Safety and effectiveness in children have not been established.*

ADVERSE REACTIONS
Serious adverse reactions have been rare in studies carried out to date, but it should be recognized that patients with impaired ventricular function and cardiac conduction abnormalities have usually been excluded.

In domestic placebo-controlled trials, the incidence of adverse reactions reported during CARDIZEM therapy was not greater than that reported during placebo therapy.

The following represent occurrences observed in clinical studies which can be at least reasonably associated with the pharmacology of calcium influx inhibition. In many cases, the relationship to CARDIZEM has not been established. The most common occurrences as well as their frequency of presentation are: edema (2.4%), headache (2.1%), nausea (1.9%), dizziness (1.5%), rash (1.3%), asthenia (1.2%). In addition, the following events were reported infrequently (less than 1%):

Cardiovascular: *Angina, arrhythmia, AV block (first degree), AV block (second or third degree — see conduction warning), bradycardia, congestive heart failure, flushing, hypotension, palpitations, syncope.*

Nervous System: *Amnesia, gait abnormality, hallucinations, insomnia, nervousness, paresthesia, personality change, somnolence, tinnitus, tremor.*

Gastrointestinal: *Anorexia, constipation, diarrhea, dysgeusia, dyspepsia, mild elevations of alkaline phosphatase, SGOT, SGPT, and LDH (see hepatic warnings), vomiting, weight increase.*

Dermatologic: *Petechiae, pruritus, photosensitivity, urticaria.*

Other: *Amblyopia, dyspnea, epistaxis, eye irritation, hyperglycemia, nasal congestion, nocturia, osteoarticular pain, polyuria, sexual difficulties.*

The following postmarketing events have been reported infrequently in patients receiving CARDIZEM: alopecia, gingival hyperplasia, erythema multiforme, and leukopenia. However, a definitive cause and effect between these events and CARDIZEM therapy is yet to be established.

Issued 9/86

See complete Professional Use Information before prescribing.

References: ***1.*** *Schroeder JS: Mod Med 1982;50(Sept):94-116.* ***2.*** *Cohn PF, Braunwald E: Chronic ischemic heart disease, in Braunwald E (ed): Heart Disease: A Textbook of Cardiovascular Medicine, ed 2. Philadelphia, WB Saunders Co, 1984, chap 39.* ***3.*** *O'Rourke RA: Am J Cardiol 1985;56:34H-40H.* ***4.*** *McCall D, Wolsh RA, Frohlich ED, et al: Curr Probl Cardiol 1985;10(8):6-80.* ***5.*** *Frishman WH, Chorlop S, Goldberger J, et al: Am J Cardiol 1985;56:41H-46H.* ***6.*** *Shapiro W: Consultant 1984;24(Dec):150-159.* ***7.*** *O'Hara MJ, Khurmi NS, Bowles MJ, et al: Am J Cardiol 1984;54:477-481.* ***8.*** *Strauss WE, McIntyre KM, Ponsi AF, et al: Am J Cardiol 1982; 49:560-566.* ***9.*** *Feldman RL, Pepine CJ, Whittle J, et al: Am J Cardiol 1982;49:554-559.*

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Resources from the March of Dimes

BEVERLY S. RAFF PhD

The mission of the March of Dimes Birth Defects Foundation is to prevent birth defects through programs of research, medical services, and education. Toward this end, the March of Dimes produces and distributes a variety of patient-education materials including several addressing the problems of adolescent pregnancy, parenthood, and development.

The author is Vice-President for Professional Education, March of Dimes Birth Defect Foundation.

Through professional education efforts, the March of Dimes seeks to improve and expand perinatal services by disseminating new knowledge and providing assistance in the training of health professionals. Each year, the organization sponsors medical and scientific conferences, produces publications, and develops audiovisual materials.

All patient-education materials, educational kits, and audiovisual materials described here are available from your local chapter. Print materials are available in quantities of up to 250 and carry a $5 postage-and-handling charge. In Maryland, contact the March of Dimes Greater Baltimore Chapter, 15 Charles Plaza, 3rd Floor, Baltimore, MD 21201 (301–752–7990). In Washington, DC contact the March of Dimes, National Capital Area Chapter, 2700 South Quincy Street, Suite 220, Arlington, VA 22206. (703–824–0111).

- ***Babies Don't Thrive in Smoke Filled Wombs.*** Outlines the dangers of smoking for mothers and their unborn babies.
- ***Be Good to Your Baby Before It's Born.*** Provides information to guide the pregnant woman from the first prenatal visit through the delivery.
- ***Dad, It's Your Baby Too.*** Emphasizes how important the father's support is to the health of the mother and baby.
- ***D*A*T*A*: Drugs, Alcohol and Tobacco Abuse During Pregnancy.*** Discusses effects these substances can have on the unborn baby and encourages women to avoid them to increase the chances of having a healthy baby.
- ***Facts You Should Know About Teenage Pregnancy*** **(English and Spanish).** Describes physical and psychological risks of teenage pregnancy.
- ***Family Health Tree.*** Designed to trace health histories over four generations.
- ***Family Medical Record.*** A simple, comprehensive form for keeping vital family health information in one place.
- ***Genetic Counseling.*** Explains how family histories and sophisticated tests can predict many birth defects and how these conditions are inherited.
- ***Healthy Mothers, Healthy Babies Quiz.*** Focuses attention on the extent of low birth weight and infant mortality.
- ***Healthy Birthday Card.*** Serves as a reminder for prospective parents about the importance of early and regular prenatal care and careful follow-up after birth. Includes a chart for recording prenatal appointments.
- ***A Message for Teens from Teens.*** In their own words, teens give poignant reasons for their responsible decisions on childbearing and good health habits.
- ***Recipe for Healthy Babies.*** Illustrates the four basic food groups and explains daily needs for mother and baby.
- ***Sexually Transmitted Diseases.*** Describes the symptoms of common STDs as well as how to prevent and treat them, and how to keep them from damaging an unborn baby.
- ***Will Drinking Hurt My Baby?*** **(English and Spanish).** Explains the damaging effects drinking can have on the unborn child.
- ***You Are Pregnant, You're in Your Teens, and You Need Help.*** Provides information about prenatal care, nutrition and the importance of not smoking, drinking, or taking drugs during pregnancy.

The March of Dimes has developed several educational kits for purchase. These are suitable for a range of professionals involved in educating young people about responsible health and sexual behavior.

- ***Healthy Mothers, Healthy Babies Curriculum Framework.*** Designed to assist educators in preschool through high school in providing information about nutrition, environment, genetics, and human growth and development to enhance understanding of healthy pregnancy and birth.
- ***Project Alpha: Man-To-Man Talk About Teen Pregnancy.*** Addresses adolescent pregnancy and emphasizes that young men as well as young women are responsible for its prevention.
- ***Risks and Results: Making Responsible Life Choices.*** Encourages young people to focus on the realities of parenthood-by-choice *v* parenthood-by-chance. Designed to generate awareness about personal responsibility, decision-making and sharing.

Miscellaneous Posters. Featuring Marvin Hagler and Menudo in messages to teenage boys about premature fatherhood.

Set of Three Posters. Describe the dangers of alcohol and substance abuse during pregnancy.

• ***Starting a Health Family.*** Provides young people the information they need to make healthy choices about their lives and future childbearing.

• ***Time Line Chart* (English and Spanish).** This 4½ foot-long poster displays fetal development and includes advice on what the expectant mother should do and feel at each stage.

• ***You, Me and Others.*** Describes how children from kindergarten through grade six learn basic concepts of genetics. Can be used as a separate course or integrated into subject areas. The March of Dimes also offers numerous audiovisual materials that directly address adolescent pregnancy. Any of these may be borrowed (free) from the Baltimore Chapter for two weeks. Purchase prices are indicated for each item.

• ***Alcohol: Crisis for the Unborn.*** Recommended by the National Education Association, this production shows how drinking alcohol during pregnancy can have tragic results (16mm film $55; videocassette $35).

• ***A Full-Time Job.*** Explores the special problems and responsibilities that come with teenage pregnancy and parenthood (filmstrip $25, slide-tape $30).

• ***It's Up To Me.*** A message on the importance of prenatal care is directed at young pregnant women in urban areas (16mm film $75, videocassette $40).

• ***Journey to Birth.*** Explores how intelligent choices by prospective parents before and during pregnancy can help assure safe and healthy births (16mm film $85, videocassette $45).

• ***Let's Talk About You.*** Actor John Schneider explains why growing up isn't easy and discusses many concerns including birth defects (filmstrip $25, slide-tape $30).

• ***Unfinished Child.*** Explains the impact of maternal, fetal, and infant malnutrition on mental and physical development (16mm film $135, videocassette $50).

• ***Woman-Child.*** Examines the serious problem of children having children through the eyes of six teenagers (16mm film $80, videocassette $35).

• ***Nutrition Services in Perinatal Care, and Nutrition and Pregnancy,*** March of Dimes Birth Defects Foundation. Includes information on nutritional and health service requirements for pregnant and lactating women, infants, and high-risk neonates; discusses the effect of nutrition on brain growth and fetal weight gain (single copy of *Nutrition Services*, $1, single copy of *Nutrition and Pregnancy*, $5 available from the March of Dimes).

• ***Pregnancy and Childbearing During Adolescence: Research Priorities for the 1980s***, March of Dimes Birth Defects Foundation. Provides an overview of the incidence. risks, and consequences of pregnancy and childbearing for an adolescent mother and her infant (single copy, $28 available from Alan R. Liss, Inc., 41 E. 11th Street, New York, NY 10003).

• ***Reproductive Health Issue Reprints,*** March of Dimes Birth Defects Foundation. A series of reprints on such topics as fetal alcohol syndrome, psychosocial stress, low birth weight, prenatal diagnosis, patient support groups, infant behavioral development, neonatal mortality risk, and herpes genitalis and the childbearing cycle (all are available free in quantities up to 25 from the March of Dimes).

For additional information about other March of Dimes material and educational programs, contact your local March of Dimes chapter or the national headquarters.

March of Dimes Birth Defects Foundation
1275 Mamaroneck Avenue
White Plains, NY 10605
914–428–7100

Greater Baltimore March of Dimes
15 Charles Plaza–Third Floor
Baltimore, MD 21201
301–752–7990

National Capital Area March of Dimes
2700 S. Quincy St. Suite 200
Arlington, VA 22206
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Emergency Psychiatric Beds 800-492-0610

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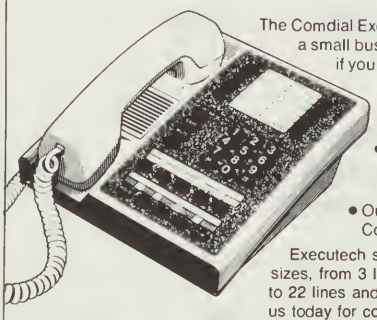
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All courses at the Turner Auditorium Building unless otherwise indicated. Sponsored Continued Education Activities for 1987–88. Info: Office of Continuing Education, 720 Rutland Ave., Turner Auditorium, Baltimore, MD 21205 (301-955-5880).

Dec 7–9 International Neuroradiology: Current Practices and Technique. Fee: $500 physicians, $400 technicians; 22.5 AMA Cat I credits. Info: C. Kearney 301-955-3168.

Dec 10–12 Fifteenth Annual Mason F. Lord Symposium on Geriatric Medicine and Board Review Course, in Annapolis. Fee: $250 (limited spaces for residents and fellows at reduced fee); 23 AMA Cat I credits. Info: D. Heydinger 301-955-6046.

Mar 17–18 Imaging Living Brain Chemistry: Principles and Practice. Fee: $290, residents and Fellows $145; 14 AMA Cat I credits. Info: P. Macedonia 301-955-6085.

Apr 11–16 Pediatric Trends 1988. Fee: $500, residents and fellows $350; 45 AMA Cat I credits, 45 PREP AAP credits. Info: P. Macedonia 301-955-6085.

Diagnostic Cytopathology for Pathologists, 1988 Postgraduate Institute: February to May 1988, subspecialty residency in Clinical Cytopathology, compressed into two courses, both must be taken:

Feb–Apr Home Study Course A—personal reading and microscopic study at own laboratory in preparation for Course B.

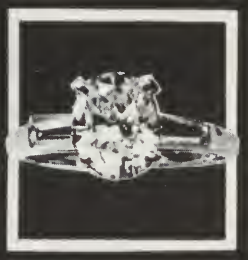
Apr 25–May 6 In-residence Course B—lecture series, laboratory study, and clinical experience at the Johns Hopkins Medical Institutions, Baltimore, MD, USA.

Designed solely for pathologists who are certified (or qualified for certification) by the American Board of Pathology or its international equivalent, this institute is an intensive refresher in all aspects of Clinical Cytopathology with time devoted to newer developments and techniques, special problems, and recent applications including *immunodiagnosis and needle aspiration.* Loan slide set with texts (Course A) will be sent each participant within the US and Canada for home study during Feb through Apr before Course B in Baltimore on April 27 to May 8. Participants *outside* the US and Canada must make arrangements to study Course A before Course B. *The entire course is given in English.*

Application and completed preregistration is advised ASAP: preregistration must be completed **before March 25, 1988,** unless by special arrangement. Info: John K. Frost MD, 604 Pathology Bldg, The Johns Hopkins Hospital, Baltimore, MD 21205, USA.

Johns Hopkins Medical Grand Rounds: audiocassettes, slides, and booklet. 30 topics and 40 AMA Cat I credits/year. Contact 301-955-3988, Office of Continuing Education, 720 Rutland Ave., Baltimore, MD 21205.

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CME Courses: For each course additional information may be obtained by contacting Program of Continuing Education, University of Maryland School of Medicine, Room 300, MSTF, 10 South Pine St., Baltimore, MD 21201 (301-328-3956).

Nov 28, 1987, Jan 16, and Feb 27, 1988 Neurology and Music at Maryland. Fee: $150; 9.75 AMA Cat I credits. Info: Dr. Kenneth Johnson, Department of Neurology, University of Maryland Hospital, 22 S. Greene St., Baltimore, MD 21201 (301-328-6484).

Dec 11 Diabetes Update. Fee: $25; 5.5 AMA Cat I credits.

Jan 19–20 He Wont' Talk, He Won't Listen: Language and Behavior Problems in the Pre-School Child. Fee and credits TBA.

Jan 22 Infectious Diseases. Fee $25; 5+ AMA Cat I credits.

Feb 25 Geriatric Care. Fee: $25; 5+ AMA credits Cat I.

Mar 24–25 Fourth National Traumatic Brain Injury Symposium "The Neglected Disease," sponsored by the Speech-Communication Disorders Program, MIEMSS, Shock Trauma Center, Baltimore. Info: R. Schwartz 301-328-6101.

Visiting Professor Program—Director of speakers and topics available for area hospitals and other heath care organizations. An administrative fee is charged. Info: 301-328-3956.

Visiting Practitioner Preceptorships—Opportunity for physicians to participate in clinical situations in the University of Maryland Medical Systems. Requires approval from clinical department/division heads. Direct inquiries to CME. AMA Cat I credits available.

Departmental Rounds and Conferences—September through June—Hands-on opportunities for practicing physicians including weekly lectures and discussions by sponsoring departments/divisions. Hour-for-hour AMA Cat I credits. Brochure available.

Miscellaneous Meetings

Jan 16 Mini Conference for Family Physicians—Therapeutic Update, Lord Baltimore Hotel, Baltimore, sponsored by the Maryland Academy of Family Physicians. Info: E. Barr 301-747-1980.

Apr 14–16 Common Hand Problems and Acute Injuries of the Hand and Upper Extremity-Chronic Wrist Pain, Park Hyatt Hotel, Washington, DC, sponsored by the National Hand Research and Rehabilitation Fund, Inc. Fee: $300, 19 Cat I credits. Info: M. Sorenson, The Hand Surgery & Rehabilitation Center, 622 Massachusetts Ave. NE, Washington, DC 20002 (202-829-1000).

May 11–15 Maryland Academy of Family Physicians Annual Meeting and Scientific Session, Sheraton Fountainebleau Inn & Spa, Ocean City. Info: E. Barr 301-747-1980.

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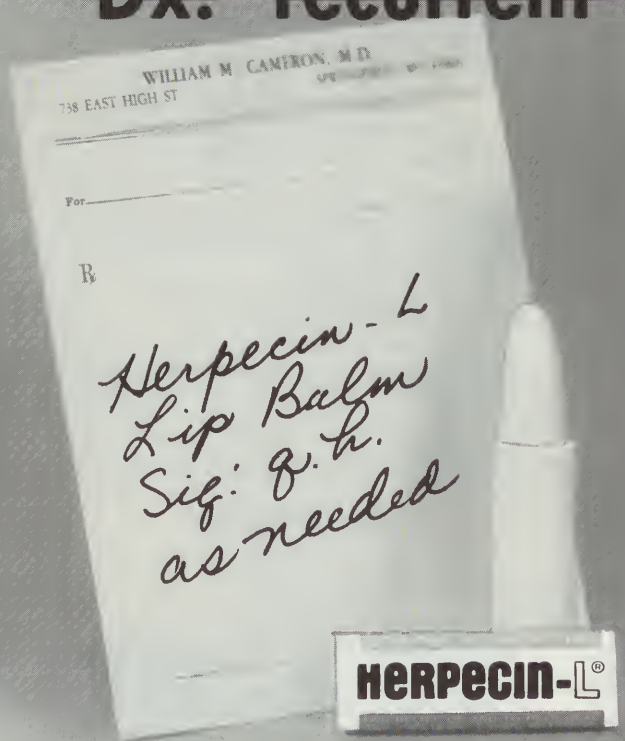
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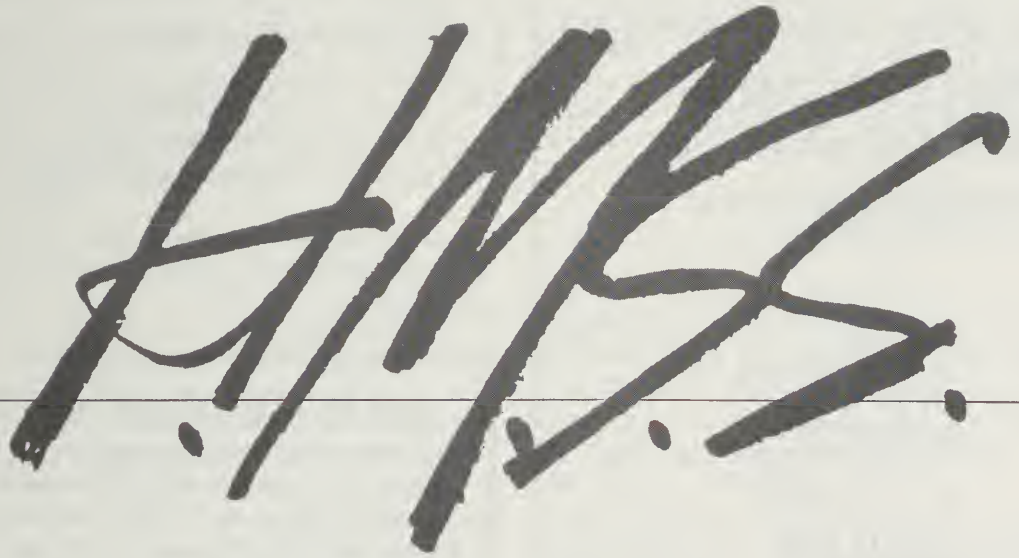
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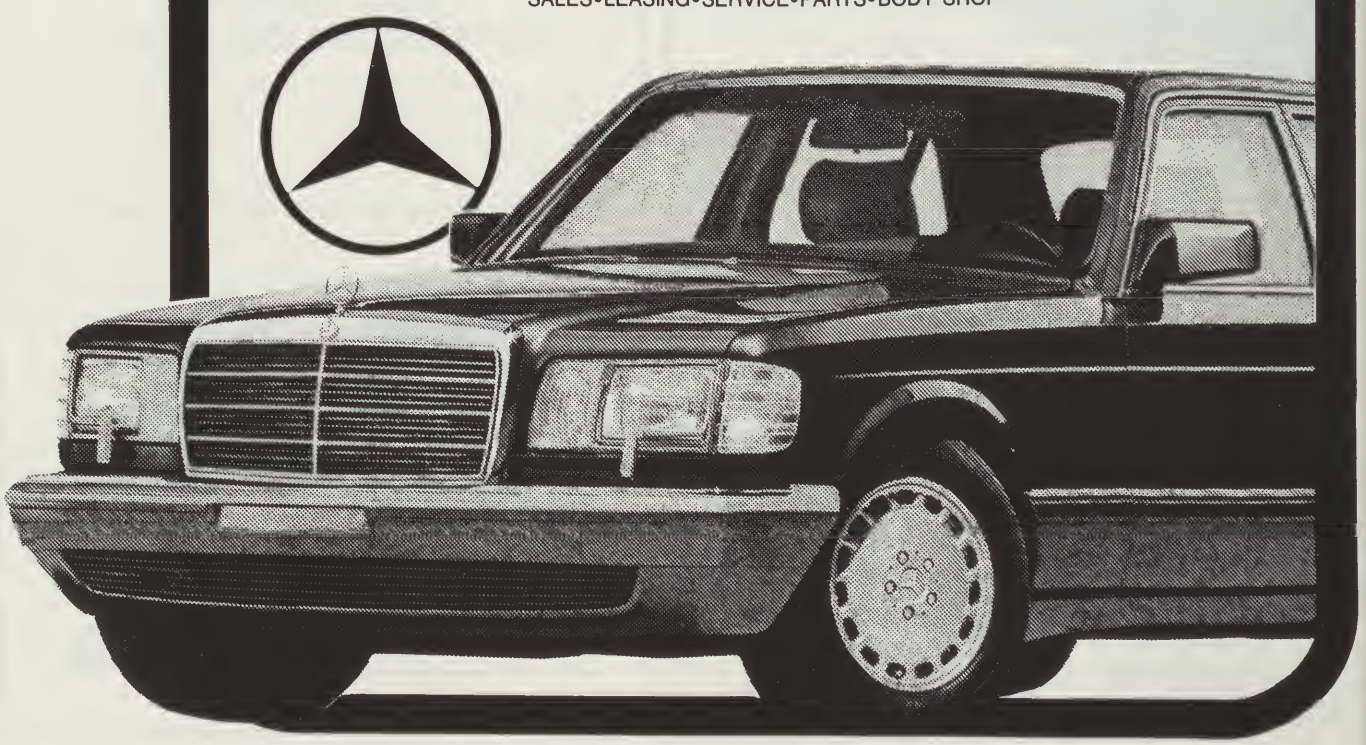
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- **Better GI absorption[6,7]**
- **Early evening dosing helps prevent nocturnal dyspnea**





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References: **1.** Flamenbaum W: *Am J Cardiol 57*(2):38A-43A, 1986. **2.** Brater DC, Fax WR, Chennavasin P: *J Clin Pharmacol 21*:599-603, 1981. **3.** Iber FL, Baum RA: *J Clin Pharmacol 21*:697-700, 1981. **4.** Henning R, Lundvall O: *Eur J Clin Pharmacol 6*:224-227, 1973. **5.** Physicians' Desk Reference, 40th ed. Oradell, NJ, Medical Economics Company, 1986, pp. 939, 1480. **6.** Pentikainen PJ, *et al: Br J Clin Pharmacol 4*:39-44, 1977. **7.** *Lasix, A Review.* Somerville, NJ, Hoechst-Roussel Pharmaceuticals, Inc., 1980.

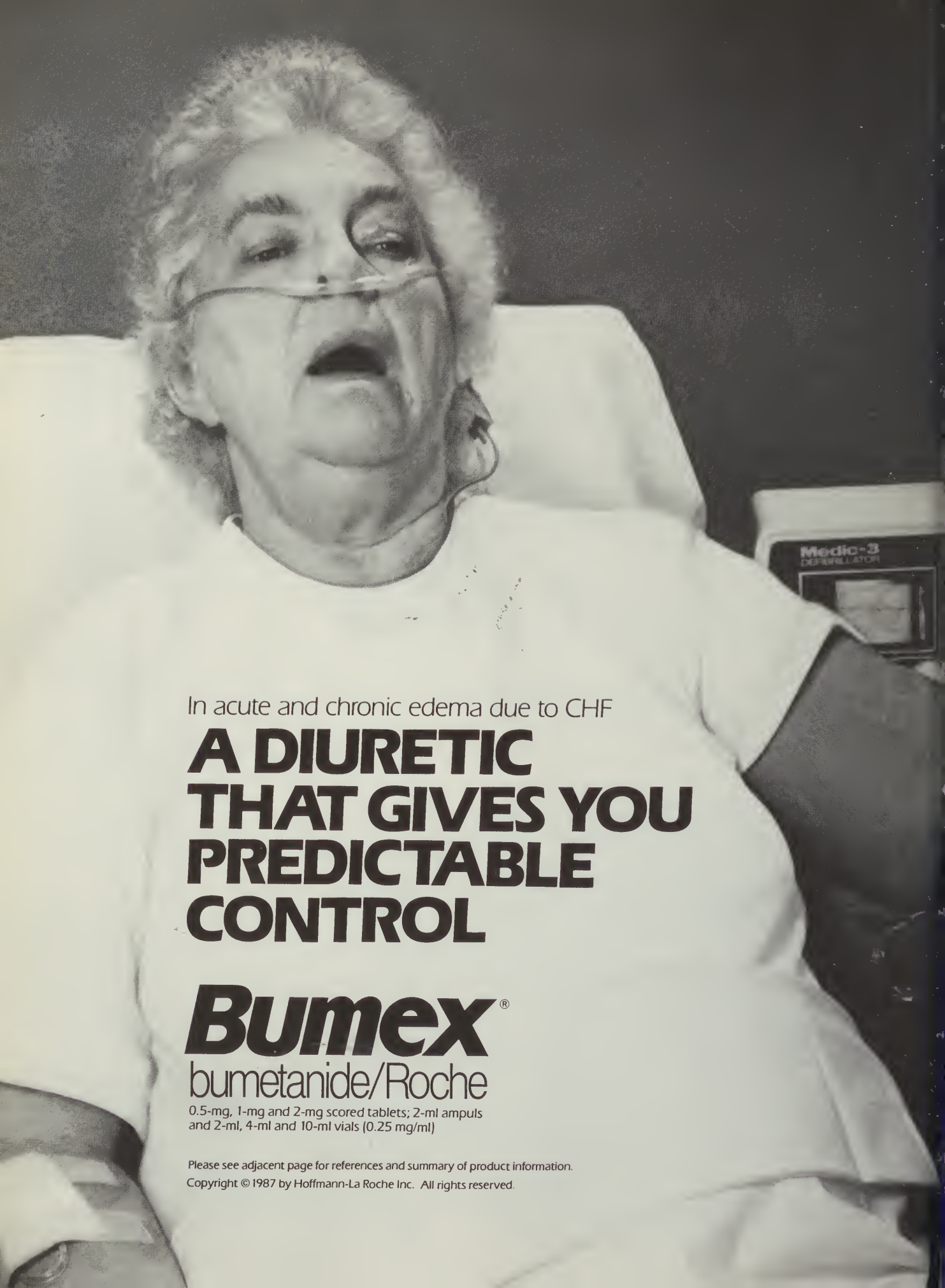
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WARNING: Bumex (bumetanide/Roche) is a potent diuretic which, if given in excessive amounts, can lead to a profound diuresis with water and electrolyte depletion. Therefore, careful medical supervision is required, and dose and dosage schedule have to be adjusted to the individual patient's needs. (See under DOSAGE AND ADMINISTRATION in complete product information.)

INDICATIONS AND USAGE: Edema associated with congestive heart failure, hepatic and renal disease, including the nephrotic syndrome.
Almost equal diuretic response occurs after oral and parenteral administration of Bumex. If impaired gastrointestinal absorption is suspected or oral administration is not practical, Bumex should be given by the intramuscular or intravenous route.
Successful treatment with Bumex following instances of allergic reactions to furosemide suggests a lack of cross-sensitivity.
CONTRAINDICATIONS: Anuria. Hypersensitivity and in patients in hepatic coma or in states of severe electrolyte depletion. Although Bumex can be used to induce diuresis in renal insufficiency, any marked increase in blood urea nitrogen or creatinine, or the development of oliguria during therapy of patients with progressive renal disease, is an indication for discontinuation of treatment.
WARNINGS: Dose should be adjusted to patient's needs. Excessive doses or too frequent administration can lead to profound water loss, electrolyte depletion, dehydration, reduction in blood volume and circulatory collapse with the possibility of vascular thrombosis and embolism, particularly in elderly patients.
Prevention of hypokalemia requires particular attention in patients receiving digitalis and diuretics for congestive heart failure, hepatic cirrhosis and ascites, states of aldosterone excess with normal renal function, potassium-losing nephropathy, certain diarrheal states, or other states where hypokalemia is thought to represent particular added risk to the patients.
In patients with hepatic cirrhosis and ascites, sudden alterations of electrolyte balance may precipitate hepatic encephalopathy and coma. Treatment in such patients is best initiated in the hospital with small doses and careful monitoring of the patient's clinical status and electrolyte balance. Supplemental potassium and/or spironolactone may prevent hypokalemia and metabolic alkalosis in these patients.
In cats, dogs and guinea pigs, Bumex has been shown to produce ototoxicity. Since Bumex is about 40 to 60 times as potent as furosemide, it is anticipated that blood levels necessary to produce ototoxicity will rarely be achieved. The potential for ototoxicity increases with intravenous therapy, especially at high doses.
Patients allergic to sulfonamides may show hypersensitivity to Bumex.
PRECAUTIONS: Measure serum potassium periodically and add potassium supplements or potassium-sparing diuretics, if necessary. Periodic determinations of other electrolytes are advised in patients treated with high doses or for prolonged periods, particularly in those on low salt diets.
Hyperuricemia may occur. Reversible elevations of the BUN and creatinine may occur, especially with dehydration and in patients with renal insufficiency. Bumex may increase urinary calcium excretion.
Possibility of effect on glucose metabolism exists. Periodic determinations of blood sugar should be done, particularly in patients with diabetes or suspected latent diabetes.
Patients should be observed regularly for possible occurrence of blood dyscrasias, liver damage or idiosyncratic reactions.
Especially in presence of impaired renal function, use of parenterally administered Bumex should be avoided in patients to whom aminoglycoside antibiotics are also being given, except in life-threatening conditions.
Drugs with nephrotoxic potential and bumetanide should not be administered simultaneously.
Since lithium reduces renal clearance and adds a high risk of lithium toxicity, it should not be given with diuretics.
Probenecid should not be administered concurrently with Bumex.
Concurrent therapy with indomethacin not recommended.
Bumex may potentiate the effects of antihypertensive drugs, necessitating reduction in dosage.
Interaction studies in humans have shown no effect on digoxin blood levels.
Interaction studies in humans have shown Bumex to have no effect on warfarin metabolism or on plasma prothrombin activity.
Pregnancy: Bumex should be given to a pregnant woman only if the potential benefit justifies the potential risk to the fetus.
Bumetanide may be excreted in breast milk.
Pediatric Use: Safety and effectiveness below age 18 not established.
ADVERSE REACTIONS: Muscle cramps, dizziness, hypotension, headache and nausea, and encephalopathy (in patients with preexisting liver disease).
Less frequent clinical adverse reactions are weakness, impaired hearing, rash, pruritus, hives, electrocardiogram changes, abdominal pain, arthritic pain, musculoskeletal pain and vomiting.
Other clinical adverse reactions are vertigo, chest pain, ear discomfort, fatigue, dehydration, sweating, hyperventilation, dry mouth, upset stomach, renal failure, asterixis, itching, nipple tenderness, diarrhea, premature ejaculation and difficulty maintaining an erection.
Laboratory abnormalities reported are hyperuricemia, azotemia, hyperglycemia, increased serum creatinine, hypochloremia, hypokalemia, hyponatremia, and variations in CO_2 content, bicarbonate, phosphorus and calcium. Although manifestations of the pharmacologic action of Bumex, these conditions may become more pronounced by intensive therapy.
Diuresis induced by Bumex may also rarely be accompanied by changes in LDH, total serum bilirubin, serum proteins, SGOT, SGPT, alkaline phosphatase, cholesterol, creatinine clearance, deviations in hemoglobin, prothrombin time, hematocrit, platelet counts and differential counts. Increases in urinary glucose and urinary protein have also been seen.
DOSAGE AND ADMINISTRATION:
Oral Administration: The usual total daily dosage is 0.5 to 2.0 mg and in most patients is given as a single dose.
Parenteral Administration: Administer to patients (IV or IM) with GI absorption problem or who cannot take oral. The usual initial dose is 0.5 to 1 mg given over 1 to 2 minutes. If insufficient response, a second or third dose may be given at 2 to 3 hour intervals up to a maximum of 10 mg a day.
HOW SUPPLIED: *Tablets,* 0.5 mg (light green), 1 mg (yellow) and 2 mg (peach), bottles of 100 and 500; Prescription Paks of 30; Tel-E-Dose® cartons of 100. Imprint on tablets: 0.5 mg—ROCHE BUMEX 0.5; 1 mg—ROCHE BUMEX 1; 2 mg— ROCHE BUMEX 2.
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Vials, 2 ml, 4 ml and 10 ml, 0.25 mg/ml, boxes of ten.

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Please see adjacent page for references and summary of product information.

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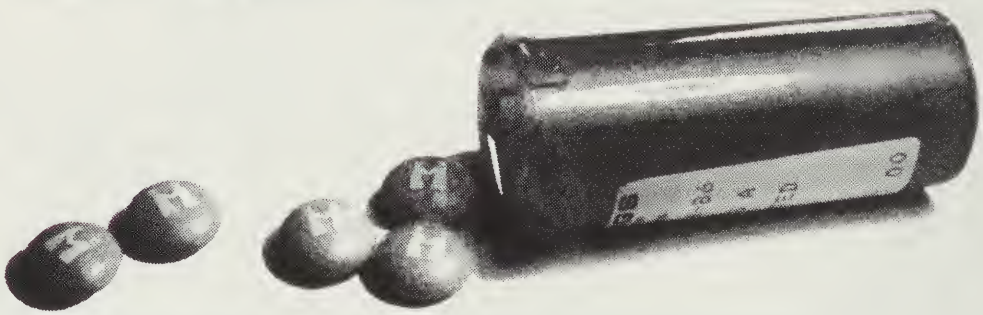
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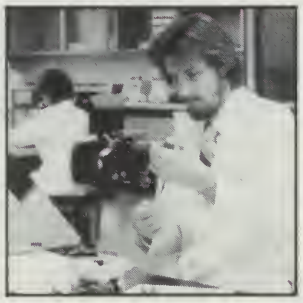
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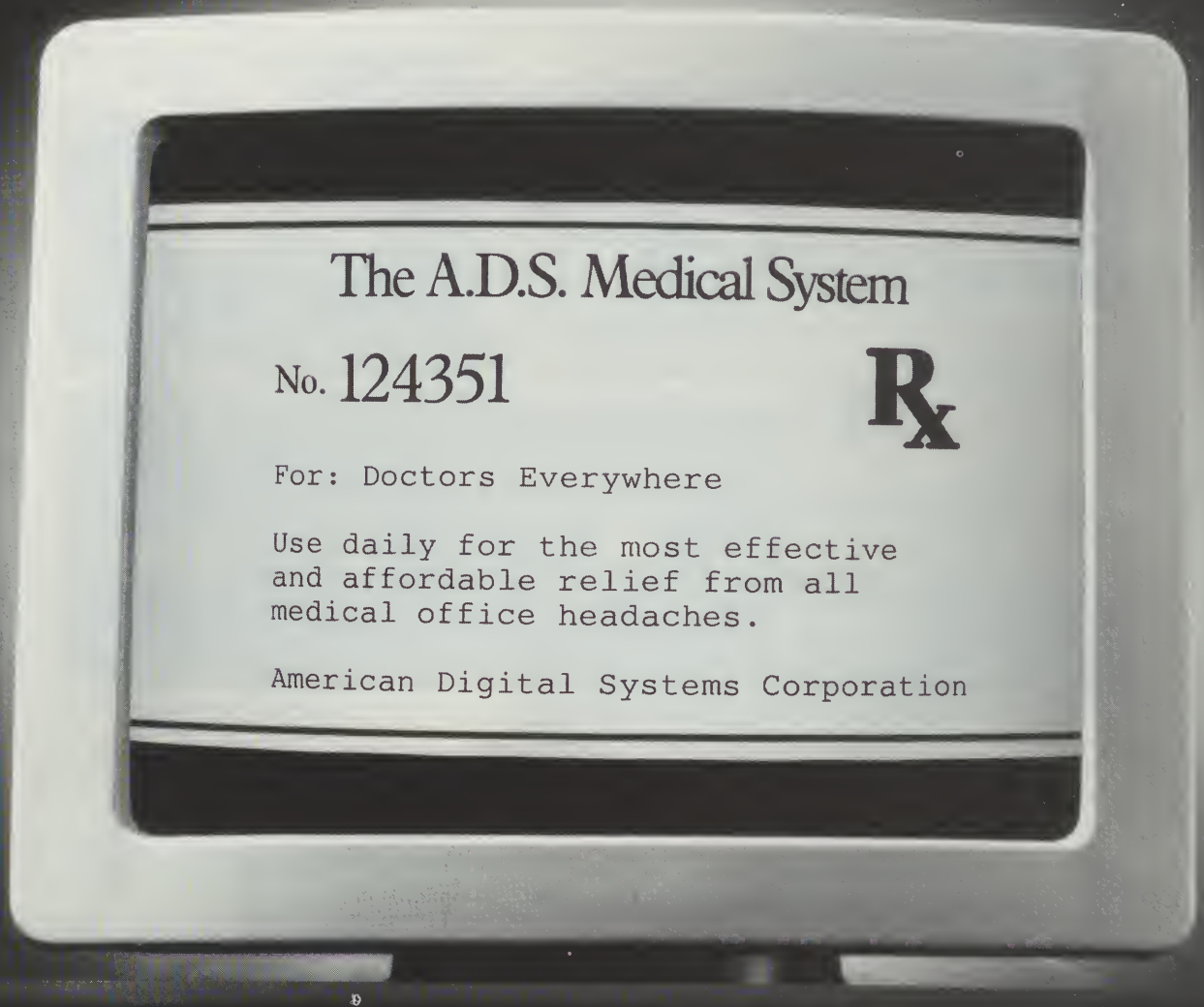
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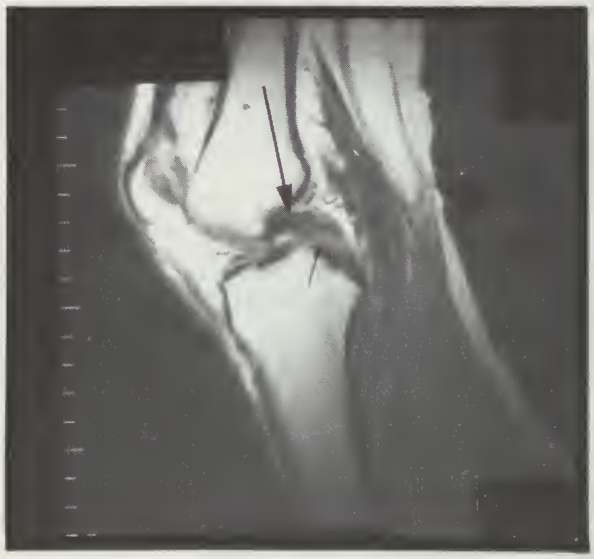
Cover: The seal dates back to the Faculty's incorporation by the Maryland legislature in 1799. The current version, designed in 1930 by the world-renowned medical artist and illustrator, Max Brödel, incorporates symbols from the Greek mythical traditions about medicine. Aesculapius, the first physician, sits surrounded by the first medical texbooks, books written by his teacher, Chiron, the centaur. Aesculapius' father Apollo, the Greek god of healing, endowed Chiron with all medical knowledge that he might pass it on to humanity. Aesculapius holds Apollo's staff and studies in the light of the sun, his father's chariot. To the right is Apollo's temple, where the sick came for healing.
(Photos of the Dedication Ceremony are by TADDER/Baltimore.)

The views in this publication are those of the authors and do not necessarily reflect the opinion of the Medical and Chirurgical Faculty of the State of Maryland.

MR UPDATE

MRI Advances the Detection of Musculoskeletal Disease

KNEE EXAMINATION



HISTORY: This 44-year old female recently sustained a knee injury and has clinical evidence of abnormal laxity of the posterior cruciate ligament.

SCAN: This parasagittal view near the midline clearly demonstrates avulsion of the posterior cruciate ligament (large arrow). The ligament is normally attached at its femoral origin. Total avulsion of the ligament has occured near its tibial insertion, the expected position of which is marked by the small arrow. The higher intensity (lighter) material at the tip of the small arrow represents hemarthrosis consequent to the recent injury.

MRI HIGHLIGHTS: The ligamentous structures of the knee are routinely well demonstrated by surface coil MRI. Surface coil imaging is essential for the special resolution needed in this area. Surface coil MRI is also useful for demonstrating meniscal injuries. Frank meniscal disruption may be seen and confirmed at arthroscopy. Since the articular surfaces, bone detail, and extra-articular structures are also shown by MRI, MRI is highly competitive with contrast arthrography. MR requires no painful injection and no ionizing radiation. MRI is also the procedure of choice for imaging aseptic necrosis of the hip and other musculoskeletal diseases.

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Cruise Alaska for AMA-ERF

Have you always wanted to see Alaska? To go on a cruise at a discounted rate with friends and make a charitable contribution to medical education and research? Now is your chance.

Next year will be very special for our Maryland Auxiliary, not only because it is our fortieth anniversary, but also because for the first time in history, the President of the National Auxiliary will be from Maryland. Mary Strauss (Mrs. Albert J., Jr.) of Washington County Medical Auxiliary will be installed as President of the American Medical Association Auxiliary at the National Convention in Chicago on June 26–29, 1988.

To mark this special year, the Maryland auxiliary is planning an extra special fundraiser for the American Medical Association Education and Research Foundation (AMA-ERF), thanks to Lourdes Morales, a Baltimore County auxilian. Owner of World Travel Associates, Inc., Lourdes has offered to donate half her travel commission and has arranged a special discounted group rate on a 10-day cruise to Alaska on Sitmar Lines.

If at least sixteen auxilians and friends book passage on this cruise, $4,000 or more will be raised for AMA-ERF. After the cruise, passengers in this group will receive a statement of the amount of their tax deductible contribution to AMA-ERF. (The amount will depend on the number participating and the total contribution to AMA-ERF.)

The itinerary on the Sitmar Lines "Fairsea" features ports of call at Victoria, Columbia Glacier, Valdez, Seward, Bear Glacier, La Perouse Glacier, Juneau, Ketchikan, and Vancouver. Special discounted group rates are available from $2,055 to $2,285 per person (d.o.). The cost includes round-trip airfare from BWI to Seattle, where the cruise embarks. A deposit of $500 per person is required at the time of reservation, and the deadline for reservations is March 30, 1988.

The information on this Alaska Cruise has been mailed to all Maryland auxilians. Anyone who has not received the information may contact Kathy Krizan, Auxiliary Executive Secretary, at the Med-Chi office, for a brochure on the project. You need not be an auxilian to participate. Everyone is welcome. The more people we have on the cruise, the more money we will raise for AMA-ERF.

We hope this project will honor Mary Strauss and our medical auxiliary by raising a record amount for medical education in our very special year, 1988.

BOBBIE NIKLEWSKI
State AMA-ERF Co-chairman

Area meetings and course announcements are listed each month under *Doctors Take Note*

Members in the News

Jimmy A. Chow MD, Silver Spring, recently presented "A Simple Anatomical Pathological Classification of Traction Injuries of the Brachial Plexus in Adults with Prognostic Significance in Treatment Planning" at the combined meeting of the American Society for Surgery of the Hand and the Carribean Society for Surgery of the Hand at Caracus, Venezuela.

• • •

Neil Goldberg MD, Baltimore, recently was appointed Division Head of Gastroenterology in the Department of Medicine at the North Charles Hospital. He is a graduate of the University of Maryland School of Medicine and state licensed in both Maryland and Florida.

• • •

John B. Hearn MD, Reisterstown, and **Robert W. Zimmerman** MD, Rockville, received special recognition from their peers during the convocation ceremonies at the annual meeting of the American College of Radiology held in San Diego. Selected for their outstanding contributions to the field of radiology, they were named as two of the 104 fellows by the College's Board of Chancellors.

Fellowships to the College are awarded for significant scientific or clinical research in the field of radiology or significant contributions to its literature. Criteria for selection also include performance of outstanding service as a teacher of radiology, service to organized medicine, and an outstanding reputation among colleagues and local community as a result of long-term superior service.

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PREVENTIVE MEDICINE ADMINISTRATION
MARYLAND DEPARTMENT OF HEALTH AND MENTAL HYGIENE

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DECEMBER 1987

MULTIPLY RESISTANT SHIGELLA SONNEI GASTROENTERITIS

A large outbreak of shigellosis occurred among the 12,000 persons from 26 states attending the annual Rainbow Family gathering at the Nantahala National Forest in North Carolina, July 1-7, 1987. Some reports suggested a 50% or greater attack rate of acute diarrhea. Subsequent surveys identified 75 attendees and 14 contacts (who had not been present at the gathering) infected with S. sonnei resistant to ampicillin, tetracycline and trimethoprim-sulfamethoxazole. Active laboratory surveillance in Maryland revealed nine cases.

Since then, the Centers for Disease Control (CDC) have received reports from Pennsylvania and Missouri of four small clusters of multiply resistant S. sonnei infection among persons who had no apparent contact with attendees of the gathering.

The treatment of infection caused by multiply resistant shigellae might present some problems. It might necessitate antibiotic sensitivity testing since the effectiveness of the oral antibiotics usually used for treating shigellosis might be limited. Illness that requires antimicrobial therapy can be treated with nalidixic acid or norfloxacin. It is important to note that neither drug has been approved by the Food and Drug Administration (FDA) for treatment of bacterial gastroenteritis. Both are quinolones that have been found to cause arthropathy in experimental young animals. No such lesions have been reported to the FDA in association with nalidixic acid or norfloxacin therapy in humans, but care should be exercised in prescribing either nalidixic acid or norfloxacin for children. Life threatening infections could be treated with gentamicin or chloramphenicol.

Prompt reporting of multiply resistant shigellae infections to the health authorities by physicians and laboratories and appropriate handling will help prevent further spread and outbreaks.

Basic hygiene and handwashing with soap after defecation and before eating has been shown to reduce secondary transmission.

Adapted from: CDC. Nationwide dissemination of multiply resistant S. sonnei following a common source outbreak. MMWR 1987,36,38:633-634.

IMMUNIZATIONS FOR U.S. CHILDREN WITH HIV INFECTIONS

The Immunization Practices Advisory Committee (ACIP) has established recommendations for immunizations of HIV-infected children in the United States. (See Table 1). Recommendations for oral polio vaccine (OPV), inactivated polio vaccine (IPV), and vaccines for measles, mumps, and rubella (MMR), diphtheria, pertussis, and tetanus (DPT), haemophilus influenzae type B disease (Hib), influenza and pneumococcal vaccines, and the use of immune globulins are summarized as follows:

Children with previously diagnosed asymptomatic HIV infection:

MMR - It is recommended that these children be vaccinated with MMR and followed for possible reactions and for the occurrence of vaccine-preventable diseases, since immunization may be less effective than for other children.

OPV - Because family members of HIV infected children may be immunocompromised due to HIV infection, it may be prudent to use IPV routinely to immunize these children. However, data suggests that OPV can be administered without adverse consequences to HIV-infected children who do not have overt clinical manifestations of immunosuppression.

DPT, Hib - Immunization with DPT and Hib vaccines is recommended in accordance with ACIP recommendations.

Children with symptomatic HIV infections:

OPV, MMR and other live vaccines should not be given to children and young adults who are immunosuppressed as a manifestation of HIV infection. These persons should be excused for medical reasons from regulations requiring measles, rubella and/or mumps immunization.

DPT, IPV, Hib - The potential benefits of immunization outweigh the theoretical concerns that stimulation of the immune system by immunization with inactivated vaccines might cause deterioration in immune function. Such effects have not been noted thus far among children with AIDS or other immunosuppressed persons. Immunizations with these vaccines is recommended but may be less effective than in immunocompetent children.

Influenza, pneumococcus - As with other conditions producing immunosuppression, annual immunization with inactivated influenza vaccine is recommended for children over 6 months of age, and one-time administration of pneumococcal vaccine is recommended for children over 2 years of age.

Immune globulins - Children with clinical manifestations of HIV infection may be at increased risk of having serious complications of infectious diseases, such as measles and varicella and therefore, following significant exposure to these diseases, should receive passive immunization with immune globulin or varicella-zoster immune globulin, respectively.

Children residing in the household of a patient with AIDS:

OPV - Children living with others known to be immunocompromised due to AIDS or other HIV infections should not receive OPV because they would be likely to excrete vaccine viruses that would be communicable to their immunosuppressed family members.

MMR - This may be given to such a child because extensive experience has shown that live, attenuated MMR vaccine viruses are not transmitted from vaccinated individuals to others.

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1. ACIP: General recommendations on immunization. MMWR 1983,32:1-8.
2. ACIP: Immunization of children infected with human T-lymphotropic virus type III/lymphadenopathy-associated virus. MMWR 1986, 35:595-598,603-606.
3. Immunizations for U.S. Children with HIV infections. FDA Drug Bulletin 1987,17:23-24.

TABLE 1

Immunizations for U.S. Children with HIV Infections

HIV STATUS	OPV	IPV	DPT	MMR	Hib	Influenza[1]	Pneumococcal[2]
Symptomatic HIV infection	no	yes	yes	no	yes	yes	yes
Asymptomatic HIV infection	no[3]	yes	yes	yes	yes	yes	yes
Children living With AIDS pt.	no[3]	yes	yes	yes	yes	yes	yes

[1] Annual immunization with inactivated influenza vaccine is recommended for children over 6 months of age

[2] One-time administration of pneumococcal vaccine is recommended for children over 2 years of age

[3] No contraindication to the child but, because family members may be immunocompromised due to HIV infection, it may be prudent to use IPV routinely to immunize these children

Submitted by Sherry Mills, M.D., M.P.H., Resident, Johns Hopkins School of Hygiene and Public Health.

* *

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* *

RECOMMENDATIONS FOR ACTIVE/PASSIVE IMMUNIZATION DURING PREGNANCY*

Immunizable disease	Vaccine/biologic: Indications for Immunization
	Live, Attenuated Virus Vaccines
Poliomyelitis	Avoid vaccine use if possible. Live oral polio vaccine (OPV) recommended only if immediate risk of exposure to wild virus is substantial. Inactivated polio vaccine (IPV) may be used if there is time to complete immunization before exposure.
Measles	Vaccine contraindicated. Passive immunization with immune globulin, 0.25 ml/kg body weight (maximum dose, 15 ml) as soon after exposure as possible may attenuate infection.
Mumps	Vaccine contraindicated during pregnancy.
Rubella	Vaccine contraindicated during pregnancy.
Yellow fever	Vaccine contraindicated except for unavoidable exposure to disease before end of pregnancy.
Smallpox	No current indication.
	Inactivated Virus Vaccines
Hepatitis B	Vaccine not contraindicated during pregnancy in a susceptible woman at high risk of hepatitis B infection. Risk of vaccine to the fetus should be negligible, although data on safety are not available.
Influenza	Standard vaccine recommendations, i.e., high-risk underlying conditions, such as pulmonary, cardiac, or renal disease. If possible, avoid administration during first trimester.
Rabies	Pregnancy does not alter indications for postexposure prophylaxis with rabies immune globulin and vaccine. Preexposure prophylaxis may be indicated if risk of exposure to rabies is substantial.
	Live, Attenuated Bacterial Vaccines
Tuberculosis	BCG vaccine contraindicated during pregnancy unless immediate risk of unavoidable exposure to infective tuberculosis is excessive.
	Inactivated Bacterial Vaccines
Typhoid	Vaccine contraindicated except for close, continued exposure to carrier or travel to endemic areas.
Cholera	Vaccine contraindicated except to meet international travel requirements.
Meningococcal infection	Vaccine safety during pregnancy not established; avoid unless risk of exposure is substantial.
Pneumoccocal infection	Vaccine safety during pregnancy not established; avoid unless risk of exposure is substantial.
Plague	No information available on safety of vaccine during pregnancy. Highly selective vaccination of individuals at substantial risk of disease.
	Toxoids
Tetanus, diphtheria	Booster dose of adult TD toxoid (tetanus, full dose; diphtheria, reduced dose) if primary series incomplete or no booster within 10 years. Primary series for unimmunized woman.

*For all products, consult the manufacturer's package insert for instruction for storage, handling, and administration. Biologics prepared by different manufacturers may vary.

Republication permission granted by the following: American College of Obstetricians and Gynecologists and the American Academy of Pediatrics from Guidelines for Perinatal Care.

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Executive Director's Newsletter

December 1987

MEDICARE PARTICIPATION DECISIONS

As you are aware by this time, Medicare participation decisions for 1988 must be submitted on or before December 31, 1987. Facts developed by the AMA to help physicians make this decision were included in the President's Letter mailed earlier this month.

It is possible Congress may legislate an additional enrollment opportunity early in 1988, enabling physicians to reconsider their enrollment decisions based on changes in the laws going into effect during 1988. If this opportunity does arise, members may want to refer to the December President's Letter or the December 4 issue of American Medical News. If changes in the law result in new facts that should be considered when making participation decisions, we will inform you immediately.

MAAC MONITORING

Beginning the week of December 7, 1987 the Maryland and Pennsylvania Medicare carriers will execute the HCFA directive to release notices of POTENTIAL MAAC VIOLATIONS to individual physicians.

HCFA has raised the cumulative threshold from $500 to $700. In cases where MAACs have been adjusted due to calculation errors, the carriers are to monitor only charges after the date of the corrected MAAC. Due to this year's delay in implementing MAAC monitoring, except for extreme cases a physician will not be referred to the Inspector General if his/her charge is reduced to or below the MAAC limit for the remainder of 1987.

Physicians who receive notices of potential MAAC violations should immediately respond in writing to their local carriers and provide documentation if the MAAC calculations are in dispute.

Current indications are that stricter monitoring standards will be applied next year, based on a better understanding of the MAAC program by both carriers and physicians. For further information contact Michael Murray, Director of Operations at the Faculty.

HOSPITAL MORTALITY DATA

Hospital Mortality Data was released by HCFA at a press conference on December 17. If you have any questions about the information released on Maryland hospitals, contact the Faculty office.

"DAW" REGULATION CLARIFIED

The Board of Pharmacy has informed all Boards representing authorized prescribers that the prescriber must specify IN HIS/HER OWN HANDWRITING words such as "dispense as written," "do not substitute," or other clear language that he/she will not permit product selection by the pharmacist. Imprinted letters "DAW" or signing above an imprint that says "do not substitute" or circling a statement of that nature does not require the pharmacist to dispense the brand.

USE OF CHAPERONES

At its November 21 meeting, Council recommended that we remind all physicians that the use of a chaperone be considered for your own protection and that of your patients. The following ethical statement appears in the Compendium of Laws, Regulations, Opinions and Policies Governing the Practice of Medicine in Maryland:

105. Use of Chaperones
In deciding whether to use a chaperone during an examination or other procedure, the physician must be cognizant that the physician/patient relationship is an important one in which both the physician and the patient are subject to individual vulnerability. Due to the variety of situations and relationships that a physician must face, each physician must exercise his/her own professional judgment in deciding whether to have a chaperone present during treatment of the patient. Among the factors which each physician should consider before making such a decision are: sex of the patient, type of examination or procedure being administered, the need for the patient to be disrobed, the personality and sensibilities of the patient, and the length of time the physician has been treating the patient. The use of a chaperone is for the protection of both the patient and the physician. In all instances, it is incumbent upon the physician, as a professional, to strive to conduct himself/herself in a manner that is above reproach and beyond the appearance of impropriety.

MEMBERSHIP DIRECTORIES

1987-88 Membership Directories were mailed to all members the first week in December. If you have not received your Directory, contact the Membership Department at Med-Chi.

DUES REMINDER

1988 dues notices have been mailed to all members. To qualify for physician's defense panels, dues must be paid by January 31, 1987. Anyone who did not receive their dues notice should contact the Med-Chi Membership Department.

RESOLUTIONS DEADLINE

The deadline for submission of resolutions for consideration at the 1988 Annual Meeting of the House of Delegates is FRIDAY, MARCH 4. Resolutions must be sponsored by a Med-Chi member, a component society of the Faculty, the Council, or committees of the Faculty. A resolution introduced by an individual member must have the endorsement of either one-third of the membership of his/her component society or 30 members of his/her component society, whichever is smaller.

1988 ANNUAL MEETING

The 1988 Annual Meeting will be held Wednesday-Friday, April 27-29 in Baltimore. The meetings and exhibits will be held at the Baltimore Convention Center. The sleeping rooms will be at the Harbor Court Hotel, and the Presidential Banquet will be held on Thursday, April 28 at the Hyatt Regency Hotel. Mark your calendar now.

Angelo J. Troisi, F.A.C.H.E.
Executive Director

* * * IMPORTANT * * *

MARYLAND LAW REGARDING NOTICE OF PARTICIPATION IN THE MEDICARE PROGRAM

On July 1, 1985 a law was passed in Maryland requiring physicians to post a notice in their offices regarding their participation status in the Medicare program. It has been brought to our attention that some physicians are not complying with this law. Therefore, Med-Chi has developed the signs on the next 3 pages for your use. The appropriate sign should be detached and posted in your office.

The law, which is outlined in Section 14-705 of the Health Occupations Article of the Annotated Code of Maryland, states:

> If a physician is engaged in the private practice of medicine in this State, the physician shall display a notice written in English that is plainly visible to patients in the office of the physician concerning whether the physician:
>
> (1) Is a participating physician under the Medicare program and, therefore, accepts assignment for all Medicare claims;
>
> (2) Accepts Medicare assignment on a case-by-case basis; or
>
> (3) Does not accept Medicare assignment in any case.
>
> This requirement DOES NOT apply to a physician or group of physicians who:
>
> (1) Have exclusive contracts with a health maintenance organization;
>
> (2) Treat only the patients of the health maintenance organization; and
>
> (3) Agree to accept full assignment for covered services rendered.
>
> A PERSON WHO VIOLATES ANY PROVISION OF THIS LAW IS GUILTY OF A MISDEMEANOR AND ON CONVICTION IS SUBJECT TO A FINE NOT TO EXCEED $5,000 OR IMPRISONMENT NOT EXCEEDING 5 YEARS OR BOTH.

If you have any questions about this matter, contact the Med-Chi Government Relations Department at 539-0872 or 1-800-492-1056.

For My Medicare Patients

I PARTICIPATE IN THE MEDICARE PROGRAM
AND
ACCEPT ASSIGNMENT FOR ALL MEDICARE CLAIMS

If you have any questions about my fees, please feel free to discuss them with me. As your physician, I am interested in your total health care.

_____

Physician's Signature

This sign was prepared by the Medical and Chirurgical Faculty of Maryland (The Maryland Medical Society) in accordance with Section 14-705(b) of the Health Occupations Article of the Annotated Code of Maryland.

For My Patients

I ACCEPT MEDICARE ASSIGNMENT ON A CASE-BY-CASE BASIS

If you have any questions about my fees, please feel free to discuss them with me. As your physician, I am interested in your total health care.



Physician's Signature

This sign was prepared by the Medical and Chirurgical Faculty of Maryland (The Maryland Medical Society) in accordance with Section 14-705(b) of the Health Occupations Article of the Annotated Code of Maryland.

For My Patients

I DO NOT ACCEPT MEDICARE ASSIGNMENT IN ANY CASE

If you have any questions about my fees, please feel free to discuss them with me. As your physician, I am interested in your total health care.

_____

Physician's Signature

This sign was prepared by the Medical and Chirurgical Faculty of Maryland (The Maryland Medical Society) in accordance with Section 14-705(b) of the Health Occupations Article of the Annotated Code of Maryland.



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Passive Smoking and Adverse Health Effects

BRIAN W. McCRINDLE MD

Passive smoking is a recently recognized cause of significant morbidity and possibly mortality, particularly in children. There is evidence to support both personal and public health efforts to deal with this preventable problem.

The author is a Postdoctoral Fellow at The Johns Hopkins School of Medicine, Department of Pediatrics.

Passive smoking, which refers to the often involuntary exposure of nonsmokers of all ages to environmental tobacco smoke (ETS), has become a popular topic. Increasing pressure from "nonsmokers' rights" groups has resulted in steps being taken at many levels toward providing ETS-free surroundings. Evidence is accumulating in the medical literature documenting the harmful health effects of passive smoking. The recent Surgeon General's Report[1] and the National Academy of Science's Report[2] on passive smoking have been instrumental in summarizing evidence and in bringing attention to this issue.

Mechanics of Passive Smoking

Since over 30 percent of the adult population in the United States are active cigarette smokers, the chances of significant ETS exposure are great for the majority of the population. Exposure to the components of ETS can occur in homes, in public places, and at work. Fetuses can be exposed *in utero*.

Not all the tobacco smoke that enters our breathing space is the same. Mainstream smoke is that drawn directly into the mouth of a smoker; sidestream smoke is emitted into the surrounding air from a smoldering tobacco product between drawing puffs. Sidestream smoke is the major contributor to ETS and contains higher concentrations of some toxic compounds than either inhaled or exhaled mainstream smoke. Many of these compounds are carcinogenic, and cigarette filters have little effect in decreasing the concentrations of these compounds in ETS.

There are thousands of substances in tobacco smoke. Some, like carbon monoxide, can be quantitated by relatively uncomplicated methods and have proved linkages to adverse health effects.[3] The vast majority of constituents are not as well defined, and their contribution to ETS and its harmful effects has not been fully described. Examples of the concentrations of particulate contaminants in the air from some sampled environments are provided in the Table.[4] Some methods developed to quantitate exposure to ETS have met with a great deal of criticism. For instance, questionnaires designed to collect data on exposure to ETS tend to have limited validity and reliability. In contrast, measures using biologic markers, such as salivary or urinary cotinine (the major metabolite of nicotine) levels, are useful in providing an objective indication of average daily exposure but, unfortunately, have not been used in many studies.[5]

Acute Health Effects

Nonsmokers object most strongly to the irritating sensory reactions caused by exposure to ETS. The discomfort associated with the perception of odor and the irritation of eyes and upper airways is reason enough for many to support smoking bans in public places. These nuisance effects may be as significant as other acute and long-term health effects, particularly for individuals with an atopic predisposition, who demonstrate hypersensitivity reactions to ETS that are accompanied by more severe and disabling symptoms.[2]

Passive smoking has been shown to be a significant factor in increased morbidity in childhood. Maternal smoking is associated with increases of from 18 to 34 percent in the prevalence of childhood asthma.[6] Increased frequency of days with symptoms of asthma and increased numbers of emergency room visits have been noted for asthmatic children in households with one or more smokers.[7] Children exposed to ETS have increased respiratory symptoms and illnesses,[8] including an increased prevalence of cough, sputum production, wheezing, and sore throat. Bronchitis, pneumonia, and other lower respiratory tract illnesses occur more frequently in children less than one to two years old if one or both parents smoke. Evidence has linked household exposure to ETS with increased rates of chronic

Table. Particulate Contaminants from Tobacco Smoke in Sampled Environments*

Locale	RSP† ($\mu g/m^3$)
Bar and grill	589
Firehouse bingo	417
Cocktail party	351
Church	
Bingo game	279
Sunday service	30
Bowling alley	202
Hospital waiting room	187

* Adapted from Repace, J. and Lowrey, A. "Indoor Air Pollution, Tobacco Smoke, and Public Health." *Science* 208(1980):469.
† Respirable Suspended Particles

HBP Commentary is contributed by the Maryland Commission on High Blood Pressure and Related Cardiovascular Risk Factors, 201 W. Preston St., Baltimore, MD 21201 (301-225-5891). Editors: R. Patterson Russell MD, Past Chairman; Donald O. Fedder PharmBS, DrPH, Chairman; and Carol Lewis MPH, ScD, Executive Director.

ear infections and middle-ear effusions in young children.[9]

The negative effects of a pregnant woman's smoking on her developing fetus are well documented.[10] There is clear evidence that passive smoking also has significant effects on the fetus, particularly in causing low birth weight.[11] The possibility of other late effects is complicated by the effects of continued exposure of these infants to ETS postnatally.

Long-Term Health Effects

A higher incidence of lung cancer in persons with prolonged exposure to ETS is reported by some major epidemiologic studies; summary estimates show an increased risk of 34 percent of lung cancer in nonsmokers married to smokers compared with nonsmokers married to nonsmokers.[2] There is no consistent evidence for an increased risk for cancers other than lung cancer, but there is tentative evidence for an increased risk of hematopoietic malignancies in adults with a history of early life exposure to parents' smoking.[12]

Although smoking is a major risk factor for cardiovascular disease, the role of passive smoking is less well known.[2] For normal young adults, exposure to ETS has no significant effect on heart rate or blood pressure, either at rest or during aerobic exercise. However, increased carbon monoxide levels under conditions of ETS exposure might result in an increased risk of recurrent episodes of chest pain in individuals with angina, and might effect the electrical stability of the compromised heart and predispose to sudden death. Some studies have shown small increases in risk of chronic cardiovascular morbidity and mortality attributable to passive smoking, but their statistical significance has been questioned. Hirayama reported an increased relative risk for cardiovascular diseases of 1.3 for nonsmoking women whose husbands smoked more than 19 cigarettes per day compared with nonsmoking women whose husbands did not smoke.[13]

Possible relationships between growth and development in children and exposure to ETS have been explored in a few studies. After controlling for smoking during pregnancy, a very small negative effect on attained height of 0.3 cm per each 20 cigarettes smoked daily in the child's home was noted in one study.[14] No consistent effect of passive smoking on development has been noted.

Economic Considerations

Health care costs attributable to the effects of active smoking are well recognized and are estimated to exceed $17 billion per year, a figure that rises to $41 billion when the costs of lost work and productivity are considered.[15] The additional costs attributable to the health effects of passive smoking are beginning to be identified. For example, Evans *et al.* found that for children of families with one or more smokers the increased numbers of emergency room visits made for asthma care and the increased frequency of days with symptoms of asthma translated into an extra $92 per asthmatic child per year in health care costs directly attributable to passive smoking.[7]

Ironically, most of the above costs are borne by the nonsmoking majority, predominantly through the payment of higher health insurance premiums.[16] **In addition, the federal government subsidizes the tobacco industry.** Many health policy experts suggest these subsidies should be eliminated and the funds redirected into public education and research pertaining to the adverse health effects associated with both active and passive smoking.[17]

Summary and Recommendations

Evidence is accumulating that documents the significant adverse health effects of exposure to ETS. Most public health efforts have been directed toward protecting children, since the evidence for adverse health effects is strongest for this age range; statements and recommendations supportive of the public health efforts have been issued by both the American Academy of Pediatrics and the American Thoracic Society.

Efforts should be focused at preventing initiation of smoking. Children need to be taught that smoking is a harmful and an addictive behavior. Through social skills development, adolescents should be encouraged to remain or become nonsmokers. Health professionals have an opportunity to make a significant impact at multiple levels on the problem of passive smoking: recognition of the problem remains the first step.

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Enlarged Cervical Lymph Node

Benign lesions in the neck may present as masses. These may originate from the skin as inclusion cysts or from the subcutaneous tissue as lipomas. Others are congenital, for example, thyroglossal duct cyst and branchial cleft cyst. Other benign tumors may originate from muscles, fibrous tissue, or nerve tissue giving rise to myomas, fibromas, or neuromas. Thyroid nodules should not be confused with lymph node conditions.

Some patients present with enlarged cervical lymph nodes. These can be due to (1) nonspecific infection such as streptococcal infection of the oral cavity or oropharynx, (2) specific infections such as infectious mononucleosis, tuberculosis (TB), or fungal, (3) autoimmune disorders such as rheumatoid nodules or acquired immune deficiency syndrome (AIDS), (4) malignant conditions such as lymphomas or metastatic carcinomas from a known or unknown primary site.

An accurate history and physical examination, including a complete head and neck examination, can be of great value in determining or suspecting the cause of the enlarged lymph nodes in the neck. If an infection is suspected, antibiotic therapy and continuous observation of the patient on a biweekly basis for six to eight weeks probably will eliminate most of the nonspecific infections. The patient must be observed until all the cervical lymph nodes become nonpalpable. Serum heterophile antibody, two weeks after the onset, will determine whether such enlarged lymph nodes are due to infectious mononucleosis. On the other hand, if these enlarged lymph nodes persist, further investigation is indicated. If fungal infection is suspected, serum for antibody levels should be obtained prior to applying fungal skin tests. Serum HIV is used to rule out AIDS.

A diligent reexamination of the upper aerodigestive system is in order to detect a primary tumor in the area, and if one is found, the patient is treated accordingly. However, if no primary is found, needle aspiration of the lymph node for cytopathologic examination may establish the diagnosis of metastatic carcinoma, but it is of much less help in diagnosing other conditions. If the needle aspiration is negative or not conclusive and no primary tumor has been found, excisional biopsy of an enlarged lymph node is needed to establish the diagnosis. The skin incision may be placed, if possible, within the future surgical incision if neck dissection is contemplated. The freshly excised lymph node should be divided and submitted for (1) aerobic and anaerobic cultures and sensitivity, (2) acid fast smear and TB culture, (3) fungal culture, and (4) histopathologic examination. It should be kept in mind that autoimmune diseases are hard to diagnose, as the biopsied lymph node may reveal hyperplasia only.

If malignancy is detected in the biopsied lymph node, the pathologist should be able to characterize its nature and possibly the place of origin. The biopsy may reveal (1) lymphoma: Hodgkin's or non-Hodgkin's, or (2) metastatic carcinoma: epidermoid, adenocarcinoma, anaplastic, or melanoma. Patients found to have lymphoma must undergo complete work-up for accurate staging, as the type of therapy will depend on the type and stage of the lymphoma.

Those who are found to have metastatic carcinoma are divided into three main groups.

1. Those with epidermoid carcinoma must undergo hypopharyngeal and nasopharyngeal examination and even blind biopsies of nasopharynx, tonsils, base of the tongue, and pharyngeal wall. Because epidermoid carcinomas may arise also from the lungs or esophagus, chest x-ray, bronchoscopy, esophagogram, and esophagoscopy should be performed in search of the primary lesion. If no primary is detected in the lungs or esophagus, one can presume that it originated in the head and neck region. Such patients may be managed by a radical neck dissection followed by radiation therapy to both sides of the neck, nasopharynx, oropharynx, and hypopharynx.

2. Those who present with metastatic adenocarcinoma with unknown primary can be divided into two groups: (a) Upper neck, where the tumor can arise from salivary glands or thyroid. Such patients may benefit from radical neck dissection with or without irradiation. (b) Lower neck, such as the supraclavicular area, where the tumor may arise from sources below the clavicles (breast, lungs, gastrointestinal tract, ovaries, or adrenals). Such areas should be thoroughly investigated, and these patients are treated for widespread metastases probably by chemotherapy.

3. Anaplastic carcinoma must be differentiated from histiocytic lymphoma. The primary tumor site can be in the nasopharynx, oropharynx, hypopharynx, or thyroid gland. On the other hand, such tumors may present as distant metastases from other organs such as the kidneys, adrenals, pancreas, or urinary bladder. While radical neck dissection and irradiation may play some role in the management of tumors of the head and neck origin, they play no role in the others.

Patients who present with metastatic melanoma may benefit from a radical neck dissection. Their prognosis is poor; however, occasionally there is a long survival rate after a radical neck dissection. (It can be hypothesized than an occult primary lesion can either be so small that it cannot be detected clinically, or in theory, it may be rejected after it has metastasized.) The metastases may constitute resistant clones of tumor cells that may continue to metastasize until they overcome the patient.

If you have any questions, call or write the Surgical Oncology Program at the University of Maryland Medical System, Room N13E02, Baltimore, Maryland 21201 (301-328-5224).

Extranodal Lymphoma and Extraosseus Plasmacytoma

Primary lymphoma and plasmacytoma have been detected, on rare occasion, in the nasal cavity, nasopharynx, tonsils, base of tongue, pharyngeal wall, larynx, parotid, and submandibular glands. Such lymphomas are usually of the histiocytic type (non-Hodgkin's). Lymphomas and plasmacytomas can present clinically as firm, globular masses without mucosal ulceration or with minimal ulceration. Histologically, the lymphomas may be misdiagnosed as an anaplastic or poorly differentiated carcinoma. Therefore, careful histological examination of the biopsy and requestioning the pathologist are in order to avoid unnecessary extensive surgery. Local control of these tumors can be achieved by radiation therapy, as both tumors are very radiosensitive. However, the patient must be treated according to the stage for these potentially systemic diseases.

Primary lymphoma of the thyroid gland presents as a fast-growing thyroid tumor. On surgical exploration, it grossly resembles an anaplastic carcinoma. This can be differentiated by frozen section. Once diagnosis is made, total thyroidectomy followed by postoperative irradiation is to be carried out. The patient should also receive systemic chemotherapy as these tumors are usually histiocytic type.

Tumor Conferences are held weekly on Tuesday between 8–9 AM in Room N13E28 at the University of Maryland Hospital. This is an open meeting, and physicians are welcome to attend. Physicians can present cases, but please call 328-5224 by noon Monday to schedule for your case(s) and bring the pathological slides with you.

E. GEORGE ELIAS **MD**
Professor of Surgery and Oncology
Director, Surgical Oncology Program
University of Maryland Hospital

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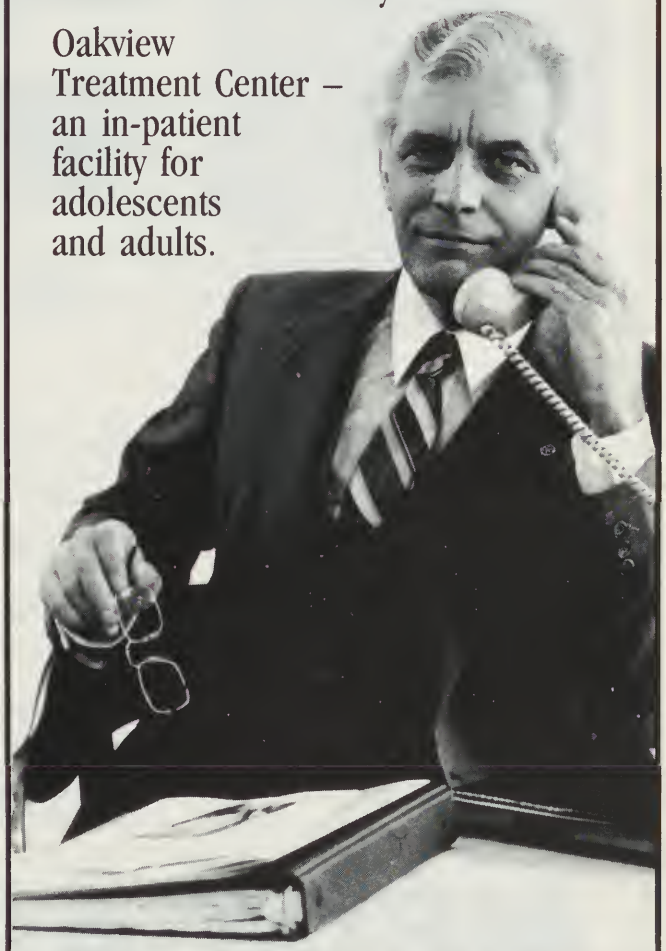
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Hypnosis: Fact and Fancy

JACOB H. CONN MD

There are probably as many definitions of hypnosis as there are hypnotists. The briefest definition is that it is a wish-fulfilling fantasy accepted as reality by a susceptible subject. Hypnosis also can be thought of as intense focal concentration with a relative suspension of peripheral awareness and decreased critical judgment. It is one of the altered states of consciousness during which the subject's perception of reality can be restructured by the hypnotist. Hypnosis includes a toleration of logical inconsistencies (your hand is beginning to rise; when it touches your face, the pain will feel more like a numbness), as well as an alteration of body image, perception, memory, and the sense of time.

Experts agree that all hypnosis is self-hypnosis. The process begins with voluntary relaxation and then role playing by the subject. As he or she is directed by the hypnotist to the point of self-forgetfulness, the subject becomes deeply involved in a passive-dependent transference relationship, like that of a child to a parent.

The hypnotic induction and procedure itself is merely a ritual that fits the subject's expectations and misconceptions. Hypnosis involves immobility and sensory deprivation (eye closure), which of itself produces an alteration of consciousness. The subject, however, is led to believe that these psychophysiologic changes are due to the power of the hypnotist and becomes more compliant, less critical, and hypersuggestible. Hypnosis is not a "force" capable of overcoming the will of the subject and is frequently a conscious, preconscious, or unconscious simulation, a rationalization, an alibi, or a legitimation of the subject's behavior in order to avoid responsibility and superego condemnation. If hypnosis can overcome the superego (as some theorists postulate incorrectly), why don't crime syndicates hire hypnotists to compel subjects to rob, murder, and transport narcotics? Criminals do not use hypnosis because it is actually a handicap. Criminals want to know where they are and what to do if anything unexpected happens.

Authentic hypnosis induces attitudes and aptitudes that only about 10 percent of the population possesses. To be deeply hypnotized, a person requires a positive aptitude for dissociation, a positive motivation (a good reason to be hypnotized), a positive expectation (that he or she will become passive and controlled), and a positive attitude of trust in the integrity and competence of the hypnotist. *It is not the hypnotist's power but the subject's willingness to be hypnotized that is the essential and necessary factor.* The influence of the hypnotist is derived from the consent and cooperation of the subject who selects the hypnotist and endows that person with the power to heal and to control his or her behavior.

Why does a subject volunteer to be hypnotized? Would you? What does the subject get out it? Hypnosis gratifies certain unconscious wishes and needs. It also provides a new way to cope with stress. There is the need to (1) be directed and dominated, (2) be free from responsibility and decision making, (3) express aggression in fantasy (4) act out or fantasize repressed sexual feelings without shame or guilt (denial).

Is every subject really deeply hypnotized when he closes his eyes, allows his hand to remain where the hypnotist puts it, and carries out suggestions? Authentic hypnosis cannot be characterized by such overt behavioral aspects, which are artifacts of the subject's expectations and of the cues derived from the hypnotist. The hypnotic process is primarily subjective (cognitive) and always involves changes of consciousness.

Public hypnotic performances, like laboratory hypnotic procedures, are role playing in make-believe situations with built-in security. The subject has faith in the integrity of the experimentor as a dedicated, ethical scientist, and in the complete safety of a publicly performed stage demonstration of hypnosis. In both the experimental situation and the stage hypnosis, the subject strives to ascertain the goals and purposes of the hypnotist and to comply to the best of his or her ability. Nevertheless, the subject does not lose the capacity to perceive whether he or she is being manipulated or treated in accordance with basic needs. Even in the "deepest" levels of hypnosis, the subject can become negativistic, mute, or dehypnotized and alerted. Moreover, if improper suggestions are made, such instructions can be recalled and corrected in the next hypnotic session by the same or another, more acceptable, hypnotist. *What hypnosis causes, hypnosis can correct.* When a subject refuses to become aroused or to surrender deleterious, posthypnotic symptoms, he or she may be resentful, revengeful, and determined to punish the hypnotist by resisting efforts to dehypnotize him or her.

The hypnotized subject often confabulates, distorts, and fabricates what he or she recalls while under hypnosis. Even more significant is that after being hypnotized, the subject becomes absolutely certain that the confabulations are true. Therefore, most courts have refused to accept hypnotic evidence as testimony.

Hypnosis has become an acceptable form of psychotherapy. It has been used successfully for (1) relaxation, (2) relief of pain, (3) facilitating the recall of traumatic events, (4) alleviating anxiety, (5) spontaneous or induced regression to earlier life periods.

Deep levels of hypnosis are not always necessary for therapeutic success; cures have been achieved during the light stages. The dangers of hypnosis are those that

Committee on Emotional Health, Gary W. Nyman MD, Chairman; Lino Covi MD, Editor.

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accompany other psychotherapies, all of which require the cooperation of the patient and his or her belief in the power of the therapist to grant (unconscious) wishes. The most skilled hypnotist in the world cannot hypnotize a subject who thinks only of eating a good dinner.

In regard to other alleged dangers, there is lack of documentation and only hearsay evidence. There are no scientific data showing that repeated hypnotic experiences result in a pathological increase of suggestibility so that the subject becomes the slave of the hypnotist. There also is no proof that women have been coerced under hypnosis to have sexual relations with their hypnotists. I have studied two hypnotized women who initially insisted on having been compelled to have sexual relations. Further investigations, however, revealed they were seeking someone with whom to have an extramarital affair to punish their philandering husbands and at the same time to feel free of guilt and superego condemnation.

Hypnosis was developed by doctors to help patients. Our courageous predecessors made great personal sacrifices to bring hypnosis to our attention. The least that we can do is to honor their memories and use this healing gift.

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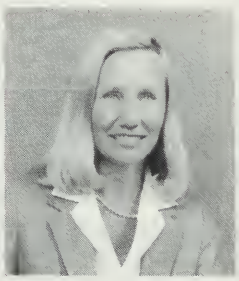
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One Minute with Diabetes

Diet and Exercise

Doctor, is it true that in general diabetic patients are in very poor physical condition?

That almost sounds like an insult to the diabetic population, but unfortunately it is true. Statistics show that up to 80 percent of noninsulin dependent diabetic patients are overweight, and that 50 percent of those are 50 percent overweight. I know of no other medical condition where such a large portion of the population hoards so much unneeded and undesirable fat.

Whenever a diet and exercise history is taken from a person with noninsulin dependent diabetes mellitus, it is commonly found that breakfast is omitted and that one meal a day is consumed beginning about 11 A.M. and lasting until going to bed. The meal consists mostly of SNACK type foods and sandwiches.

In the less privileged group, television is the favorite recreation and in the most affluent group, it is bridge or another social event. In all instances food is an accompaniment. If accurately admitted, the most exercise patients perform is walking to the car, usually parked as near as possible to the front door of the home.

Physicians should attempt to get noninsulin dependent diabetic patients to increase their physical activity as part of a behavior-modification program. Usually while people exercise they are further from the cupboard and refrigerator and less likely to consume food.

In bad weather the inclosed malls are excellent places for walking. Exercise programs of the "Y" and other group programs often are helpful. Individual memberships at Health Clubs are not fully used. The purchaser of a stationary bicycle or a rowing machine has good intentions, but the device is soon placed in the attic or closet where it cannot be seen to remind one of the need for exercise.

***DeWITT E. DeLAWTER* MD**
Editor

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Highlights: Executive Committee and Council Actions

Executive Committee—August 13, 1987

• **Minutes Approved** The minutes of the Executive Committee meeting of July 16, 1987 were approved as submitted.

• **Letter of Support to JHU—HCFA Grant** The Committee approved a request from the Center for Health Education for a letter of support to the Johns Hopkins University School of Public Health in their application for a HCFA grant entitled "Medicare Preventive Services Program."

• **Resolution on Elderly** A draft resolution in support of the delivery of quality health care to the elderly was approved by the Committee. The resolution will be presented to the Council for its consideration on September 26 and, if approved, forwarded to the House of Delegates.

• **AMA Councils** The Committee reviewed the various vacancies occurring on the AMA councils in 1988. Following discussion, a motion was passed to support Henry W. Wagner, Jr., MD for another three-year term on the AMA Council on Scientific Affairs. This recommendation will be presented to the Faculty's Council on September 26. During discussion, it was brought to the attention of the Committee that Dr. Roland Smoot is the Faculty's nominee for a position on the AMPAC Board and that letters in support of Dr. Smoot had been sent to the AMA.

• **Med-Mutual Proxies** There was lengthy discussion about the collection and solicitation of proxies for the 1988 Annual Meeting of Med-Mutual as directed by the resolution adopted by the House of Delegates in September 1986, and a recent letter from the Academy of Family Physicians inquiring about Med-Chi's plans for implementing this action. The Committee decided to defer action as called for in the resolution until advice from an "outside" attorney who is familiar with the FTC laws can be obtained and that a report be made to the House on September 26. Staff was directed to respond to the Academy of Family Physicians citing the Executive Committee's action.

• **PruCare+** It was reported that representatives from the Prudential managed health care system have informed the Faculty that PruCare+ will begin operation in the Baltimore Metropolitan area on October 1, 1987. This is essentially a PPO type product based on indemnity and with a managed care element. Contracts have been established with five hospitals (South Baltimore General, St. Agnes, Howard County, Baltimore County General, and GBMC) and from each institutional area, the plan intends to contract with approximately 25 primary care physicians and 25 subspecialists. This item was accepted for information only.

• **Letter of Support to JHH—Preventive Cardiology Grant** The Committee approved a letter of support to the Johns Hopkins Hospital endorsing its proposal to the Maryland Health Services Cost Review Commission entitled "Primary Prevention in a Tertiary Setting."

• **Slide Presentation** The Committee was presented with plans for three educational slide shows on membership benefits, physician rehabilitation, and the AMA delegation. The three automated, single-projector slide shows with mixed sound track would be produced by Maguire/Reeder Ltd. at a cost of $11,280 and completed by September 18 for presentation to the House of Delegates on September 26. Following discussion, the Committee unanimously agreed that the programs would be beneficial and approved funding from the Educational Fund. Staff was directed to have "staffed" component societies review the membership program.

• **Frostburg Community Hospital** A letter from the Frostburg Community Hospital expressing appreciation to Med-Chi for the dissemination of information on HIV Testing was received by the Committee for information only.

• **Calvert County Hospital** Reynaldo Lee-Llacer MD reported on the trip to Calvert County and indicated that, indeed, there is concern on the part of the physicians that a corporation may assume control over the quality of medical care as provided by the physicians of Calvert County. He further stated that a review of the medical staff bylaws would be conducted as soon as they are made available.

• **Med-Mutual Verification of OB Deliveries** Med-Mutual's request for Med-Chi assistance in providing data to aid in identifying OB deliveries was discussed at the last meeting of the Executive Committee, at which time, a motion was passed that Med-Chi would provide the data on the condition that the OB/GYN Society approved and that there were no legal implications. Gerard Evans, Director of Government Relations, reported the OB/GYN Society made it clear this information should not be provided to Med-Mutual, that the information furnished by the OB/GYN Society to Med-Mutual is accurate information to the best of his knowledge. Mr. Evans also indicated there could be legal implications in using these numbers for this purpose. Based on the foregoing information, it was the Committee's decision not to provide Med-Mutual with the requested data.

• **Building Fund** Joseph Harrison reported that the balance of the contribution from the Association of Philippine Physicians in Maryland to the Building Fund had been received. Total contribution: $10,000.

Executive Director Angelo Troisi announced that a contribution to support our audio/video system in Osler Hall from the Maryland Society of Eye Physicians and Surgeons was being entertained.

The Committee discussed, at length, the payment/nonpayment of the $100 assessment by the members. Mr. Harrison will prepare a full report to be submitted to the Council indicating those members who have not yet paid the assessment.

Executive Committee—September 17, 1987

• **Minutes Approved** The following minutes were

approved as submitted:

Executive Committee, August 13, 1987
House of Delegates, April 29 and May 1, 1987

• **Med-Mutual Proxies** A memo was presented to the Committee (for information) indicating that as instructed by the Executive Director, on September 1, 1987, Gerard Evans, Director of Government Relations, met with Barry Costilo, counsel for the Federal Trade Commission. He presented to Mr. Costilo a copy of the motion adopted by the Faculty's House of Delegates pertaining to the gathering of proxies for the 1988 election of governing body members of Medical Mutual and asked him to review it for possible problems with federal antitrust regulations or statutes. Following his review of the motion as well as the proxy form, Mr. Costilo informed Mr. Evans that he could see no problem in carrying out the motion as presented. A formal, official letter is forthcoming from the Federal Trade Commission and Mr. Costilo.

• **AMA Report on Medical Licensure** Donald T. Lewers MD and Michael R. Dobridge MD had been requested to review this report and present their recommendations to the Executive Committee. Their recommendation was to accept the report and forward it to the Board of Medical Examiners for information and action. Following discussion, the Committee adopted a motion to accept the report and forward it to the Board of Medical Examiners for action and further requested the Board provide the Executive Committee with the results of any action taken.

• **AMA-ERF** A request from Mrs. Elizabeth Linhardt, State Chairman of the AMA-ERF, for an increase of $5 in the voluntary contribution to the AMA-ERF was approved by the Committee. This issue will be presented with a recommendation for approval to Council at its next meeting.

• **Financial Affairs Subcommittee** This subcommittee of the Physician Rehabilitation Committee was established by the Executive Committee at its meeting of May 22, 1986. George Malouf MD, Chairman of the Subcommittee on Financial Affairs, has recommended that the subcommittee be disbanded because it is no longer necessary and, further, that the Executive Committee should assume the responsibility of all financial transactions relative to this group. Following discussion, the Committee adopted Dr. Malouf's recommendations.

• **1988 Meeting Dates** The proposed Executive Committee meeting dates for 1988 were approved as follows:

Thursday, January 14	Thursday, July 14
Thursday, February 11	Thursday, August 11
Thursday, March 10	Thursday, September 8
Thursday, April 14	Thursday, October 13
Thursday, May 12	Thursday, November 10
Thursday, June 16	Thursday, December 15

All meetings will be held at 4 p.m. in the Faculty Building.

• **Tuition Reimbursement Plan** A proposed tuition reimbursement plan for Med-Chi employees had been provided for review. Joseph Harrison, comptroller for the Faculty, advised the committee that implementation of the plan would depend on the availability of funds as determined by the approved 1988 Annual Budget. Following discussion, the plan was approved, in concept, by the Committee.

• **IPA Task Force** Leon E. Kassel MD reviewed the activities of the task force to date, and the question of whether to continue the task force was discussed by the committee. Dr. Kassel recommended disbanding the task force in light of the current managed care situation in Maryland, the indefinite delay of the CHAMPUS initiative, and the major capital investment involved in such a venture. Following discussion, it was the committee's decision to present this issue to the Council on September 26 with the recommendation that the task force be disbanded.

• **Mandated Medicare Assignment** Gerard Evans, Director of Government Relations, informed the committee that a statewide movement was in full swing to pass legislation during the 1988 General Assembly requiring all physicians in Maryland to accept, as a condition of licensure, the assigned rate in treating Medicare beneficiaries, commonly referred to as Mandated Medicare Assignment. The Faculty is engaged in a statewide Senior Outreach Program designed to establish communication with seniors. It was noted that on September 22, 1987, the Med-Chi Legislative Committee took a position unanimously opposed to Mandated Medicare Assignment.

• **Blue Cross/Blue Shield "MEDCASH"** As a matter of information, the Committee received a report from the Liaison Committee with Third Party Carriers regarding MEDCASH, a recently established corporate affiliate of Blue Cross/Blue Shield of Maryland. Following a briefing by Michael Murray, Director of Operations, it was the Committee's recommendation that this matter be referred to Council for information.

• **DHMH Reorganization** The Committee was apprised of information concerning possible reorganization activities within the Department of Health and Mental Hygiene, particularly in regard to the Board of Medical Examiners and the Commission on Medical Discipline. Following discussion, the Committee was informed that staff will keep in close contact with the Department on this issue.

Council—September 26, 1987

• **Minutes** The minutes of the Council and Executive Committee were acted upon as follows:

Minutes approved: Council, Thursday, May 21, 1987—Amended to indicate the attendance of Mrs. Ching Barretto.

Minutes accepted: Executive Committee, Thursday, June 18, 1987
Executive Committee, Thursday, July 16, 1987
Executive Committee, Thursday, August 13, 1987

• **Resolution on Health Care for the Elderly** On recommendation of the Executive Committee, Dr. Atkins presented a resolution on the "Delivery of Quality Health Care to the Elderly" to the Council for consideration. After an amendment that added clarifying data, the Resolution was unanimously approved as follows:

Whereas, the United States Government promised to provide a broad range of health care services to all elderly Americans through the creation of the Medicare Program in 1966;
Whereas, The Federal Government is now reducing payments and curtailing benefits within the Medicare Program with plans to further reduce the program's budget by 1.5 billion dollars in Fiscal Year 1988;
Whereas, The need for expanded benefits in both catastrophic and long-term care in the Medicare Program is widely accepted;
Whereas, There exists an increasing need for additional funds to cover the health care requirements of new Medicare enrollees, currently estimated at a rate of 5,000 new beneficiaries per day;
Whereas, Current and proposed financing of such expansion is both inadequate and ill-conceived;
Whereas, Like all Americans, the elderly population in this country have a compelling moral claims to dignified, high quality health care and were promised in 1945 that they had "the right to adequate medical care . . . the opportunity to achieve and enjoy good health . . . and the right to adequate protection from the economic fears of sickness"; and
Whereas, The financial burdens placed on the elderly due to unreimbursed medications and long term care can be catastrophic; therefore, be it
Resolved, That all members of the Medical and Chirurgical Faculty of Maryland will demonstrate a continuing interest in providing quality care for the elderly by actively studying the issues, opposing policies detrimental to quality, accessibility and availability of appropriate care for all Americans and constantly evaluating the health care needs of the elderly citizens of Maryland;
Resolved, That the standards of treatment for elderly citizens as well as all Marylanders shall not be compromised due to political concerns not in the best interests of the individual patient's well-being or their continued high quality of life; and
Resolved, That all members of the Medical and Chirurgical Faculty will continue to exhibit sensitivity and responsiveness to the financial status of the elderly population and will consider the patient's financial situation when making a determination whether or not to accept Medicare assignment.

• **Blue Cross/Blue Shield Diagnostic Testing Guidelines** Following presentation of the report of the Ad Hoc Committee to Study the National Blue Cross Blue Shield Diagnostic Testing Guidelines by Marvin Schneider MD, Chairman, the Council voted to accept the report. Considerable discussion ensued, and the following resolution proposed by Frederick Hatem MD was adopted:

1. *Resolved*, That the Medical and Chirurgical Faculty of Maryland express its total opposition to these guidelines as they represent an intrusion into the relationship between the physician and patient; and
2. *Resolved*, That the Faculty categorically oppose the use of these guidelines by third party payors as the basis for reimbursement; and
3. *Resolved*, That the Faculty acknowledge the guidelines to be a useful tool to improve medical education at the medical school and postgraduate levels.

• **AMA Councils** Reynaldo Lee-Llacer MD reported to the Council that the Executive Committee had endorsed Henry N. Wagner, Jr., MD to serve another term on the AMA Council on Scientific Affairs. The Council made no other nominations and voted to approve the endorsement of Dr. Wagner.

• **Committee on Professional Ethics** Louis Breschi MD, Chairman, presented a proposed revision to the ethical statement on "Research Programs" that was adopted unanimously by the Council. A new statement on "Treatment of Contagious Diseases" also was presented to Council and, after considerable discussion, was referred back to the committee for clarification. Due to time constraints, only two of the six statements submitted were considered; however, those outstanding will be presented at Council's November meeting.

• **Council Meeting Dates** The following meeting dates were approved:

1987—Saturday, November 21, 10:00 a.m.
(originally scheduled for Thursday, November 19)
1988—Saturday, March 26, 10 a.m.
Saturday, May 21, 10 a.m.
Saturday, September 24, 10 a.m.
Saturday, November 19, 10 a.m.

The January 30 meeting date will be rescheduled due to a conflict with the Faculty's scientific session to be held in Hawaii at that time. The 1988 Annual Meeting dates of the Council will be held on Wednesday, April 27 and Friday, April 29.

• **Dues Waivers** Council approved dues waivers for the following physicians, at the request of the component society indicated:

Anne Arundel County:	Marshall K. Steele, Jr., MD Annapolis (1987 dues waiver—illness)
Baltimore County:	C. Edmund Rybczynski MD Baltimore (1988 dues waiver—leave of absence)

• **Emeritus Membership** Emeritus membership was approved by the Council for the following physicians (all retired) at the request of the component society indicated:

Baltimore City	Robert A. Abraham MD, Baltimore Thomas B. Cockey MD, Lutherville Nicholas Mallis MD, Baltimore Dezso K. Merenyi MD, Baltimore William H. Mosberg MD, Baltimore Rafael Rodriguez MD, Baltimore Leonard Scherlis MD, Baltimore Umberto Villa Santa MD, Baltimore W. Earl Weeks MD, Baltimore Stanley N. Yaffe MD, Baltimore
Baltimore County	John M. Arthur MD, Baltimore

	Fritz Kobler MD, Catonsville
	Peter Lapsa MD, Phoenix
	Edwin L. Pierpont MD, Baltimore
	Salvador Rossello MD, Timonium
	Milton Schlenoff MD, Baltimore
	Rennert M. Smelser MD, Lutherville
	James E. Toher MD, Baltimore
	Warren W. Wurzbacker MD, Baltimore
Montgomery County	Parker S. Dorman MD, Chevy Chase
	James W. Egan MD, Oceanview, Delaware
	Francis A. Ostmann, Jr., MD, Rockville
	Allen J. O'Neill MD, Bethesda
	Donald Q. Ekman MD, Chevy Chase
Wicomico County	Chester C. Collins MD, Salisbury
Affiliate Member:	Chi-Chao Chiu MD, Rotonda West, Florida

• **AMA-ERF Contribution** On recommendation of the Executive Committee, the Council approved an increase of $5.00 in the voluntary contribution to the AMA-ERF as requested in correspondence from Mrs. Elizabeth Linhardt, Chairman of the State AMA-ERF. This will bring the total contribution to $20 per year.

• **Task Force on IPA** Leon E. Kassel MD reviewed the activities of the task force and presented his recommendation, which had been endorsed by the Executive Committee, that the work of the task force be terminated because of the managed care situation in Maryland, the indefinite delay of the CHAMPUS initiative, and the major capital investment involved in establishing an IPA. It was the Council's decision to endorse the action of the Executive Committee and so ordered the task force disbanded.

• **Legislative Update** The Chairman of the Med-Chi Legislative Committee, Israel Weiner MD, presented a brief update on the compaction of the rating categories. The Maryland Trial Lawyers Association and the Maryland Citizen Action Coalition are engaged in a statewide lobbying effort to reduce the numbers of rating categories presently employed by Medical Mutual from 14 to 3. Information was presented indicating this notion of grouping all of the physicians in Maryland in three categories for the purpose of insurance has the support of some members of the General Assembly. Council was advised that further information will be supplied as available.

ad·dict \ ə-'dikt \ *vb* **1 :** to devote or surrender (oneself) to something habitually or excessively **2 :** to cause (a person) to become physiologically dependent upon a drug

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Medical Miscellany

Wendell Muncie Prize Award

The Maryland Association of Private Practicing Psychiatrists and the Maryland Psychiatric Society jointly announce a contest for the awarding of a $300 prize to the author who submits the best paper pertaining to a psychiatric subject.

Eligible are physicians who reside or practice within the bounds of the Maryland District Branch of the American Psychiatric Association who, as of the deadline for the submission of the paper, are no more than ten years beyond graduation from medical school, have completed at least one year of an approved psychiatric residency, and are currently active in the profession of psychiatry.

The subject may be a clinical, research, theoretical, or other aspects of any topic pertaining to psychiatry or allied fields. The paper must be unpublished, and there are no restrictions on length.

The winner will be asked to read his or her paper at the joint meeting of the two societies scheduled for April 21, 1988.

All manuscripts must be received by February 1, 1988. They should be mailed to Cecilia S. Schocket MD, Committee Chairperson, The Wendell Muncie Annual Prize Award, 1204 Maryland Ave., Baltimore, MD 21201.

• • •

BCMS Presents Scholarships

The Baltimore City Medical Society Foundation, Inc. presented scholarships totaling $6,500 to four Baltimore City medical school students for the academic year 1987–1988. The awards are granted yearly to native Baltimoreans enrolled in US medical or osteopathic schools on the basis of demonstrated academic achievement and financial need. This year the winners are Karen M. Dembeck, Letitia W. Short, Nancy V. Brown-Holt, and Catherine C. McKesson. Their awards were, respectively, the $2,000 Nathan E. Needle MD Memorial Scholarship: Dr. Needle was a general practitioner in Baltimore City for more than 40 years, retiring in 1978. Dr. Needle died in 1983, and in 1985 his wife established this scholarship fund in his memory. The $1,500 Elliott R. Fishel MD Memorial Scholarship: Dr. Fishel, a native of Baltimore, served the community for 35 years as a general surgeon and was President of the BCMS at the time of his death in 1985. The final two Foundation Scholarships were $1,500 each.

Since 1976 the Baltimore City Medical Society Foundation, Inc. has contributed $48,900 to Baltimore City medical school students for whom the cost of medical education is a heavy burden. While no restrictions are attached to the scholarships, the intent is to encourage Baltimore City students to return to the city to practice after completion of their training. Funds for the scholarships and the other Foundation activities are contributed by Baltimore City Medical Society members, their families, and friends.

The Library Page

Selected Medical Literature Searches

The following are among the computerized medical literature searches provided to Med-Chi members during September 1987.

		No. of Citations
1.	Alcoholism and peripheral nerve diseases	27
2.	Asthma and tobacco smoke pollution	12
3.	Cytomegalovirus pneumonia	20
4.	Heparin and heart diseases	17
5.	Medicine and culture	28
6.	Nursing shortages	14
7.	Ovarian cysts, menarche, and fertility	28
8.	Physician advertising and marketing	28
9.	Sclerosing solutions and varicose veins	26
10.	X-ray computed tomography of the tarsal bones	30

If you would like a copy of one of these searches or a search run on any biomedical topic, call or write the library.

SUSAN E. HARMAN
Reference and Circulation Librarian

Medical and Chirurgical Faculty of the State of Maryland Library, 1211 Cathedral Street, Baltimore, MD 21201. Joseph E. Jensen, Librarian.

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Before prescribing, see complete prescribing information in SK&F CO. literature or *PDR*. The following is a brief summary.

WARNING

This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

Contraindications: Concomitant use with other potassium-sparing agents such as spironolactone or amiloride. Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K^+ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K^+ intake. **Associated widened QRS complex or arrhythmia requires prompt additional therapy.** Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available. Sensitivity reactions may occur in patients with or without a history of allergy or bronchial asthma. Possible exacerbation or activation of systemic lupus erythematosus has been reported with thiazide diuretics.

Precautions: The bioavailability of the hydrochlorothiazide component of 'Dyazide' is about 50% of the bioavailability of the single entity. Theoretically, a patient transferred from the single entities of triamterene and hydrochlorothiazide may show an increase in blood pressure or fluid retention. Similarly, it is also possible that the lesser hydrochlorothiazide bioavailability could lead to increased serum potassium levels. However, extensive clinical experience with 'Dyazide' suggests that these conditions have not been commonly observed in clinical practice. Angiotensin-converting enzyme (ACE) inhibitors can elevate serum potassium; use with caution with 'Dyazide'. Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids, and during concurrent use with amphotericin B or corticosteroids or corticotropin [ACTH]). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Cumulative effects of the drug may develop in patients with impaired renal function. Thiazides should be used with caution in patients with impaired hepatic function. They can precipitate coma in patients with severe liver disease. Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic and hemolytic anemia have been reported with thiazides. Thiazides may cause manifestation of latent diabetes mellitus. The effects of oral anticoagulants may be decreased when used concurrently with hydrochlorothiazide; dosage adjustments may be necessary. Clinically insignificant reductions in arterial responsiveness to norepinephrine have been reported. Thiazides have also been shown to increase the paralyzing effect of nondepolarizing muscle relaxants such as tubocurarine. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. Triamterene has been found in renal stones in association with the other usual calculus components. Therefore, 'Dyazide' should be used with caution in patients with histories of stone formation. A few occurrences of acute renal failure have been reported in patients on 'Dyazide' when treated with indomethacin. Therefore, caution is advised in administering nonsteroidal anti-inflammatory agents with 'Dyazide'. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine. Hypokalemia is uncommon with 'Dyazide', but should it develop, corrective measures should be taken such as potassium supplementation or increased dietary intake of potassium-rich foods. Corrective measures should be instituted cautiously and serum potassium levels determined. Discontinue corrective measures and 'Dyazide' should laboratory values reveal elevated serum potassium. Chloride deficit may occur as well as dilutional hyponatremia. Concurrent use with chlorpropamide may increase the risk of severe hyponatremia. Serum PBI levels may decrease without signs of thyroid disturbance. Calcium excretion is decreased by thiazides. 'Dyazide' should be withdrawn before conducting tests for parathyroid function. Thiazides may add to or potentiate the action of other antihypertensive drugs. Diuretics reduce renal clearance of lithium and increase the risk of lithium toxicity.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances; postural hypotension (may be aggravated by alcohol, barbiturates, or narcotics). Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and respiratory distress including pneumonitis and pulmonary edema, transient blurred vision, sialadenitis, and vertigo have occurred with thiazides alone. Triamterene has been found in renal stones in association with other usual calculus components. Rare incidents of acute interstitial nephritis have been reported. Impotence has been reported in a few patients on 'Dyazide', although a causal relationship has not been established.

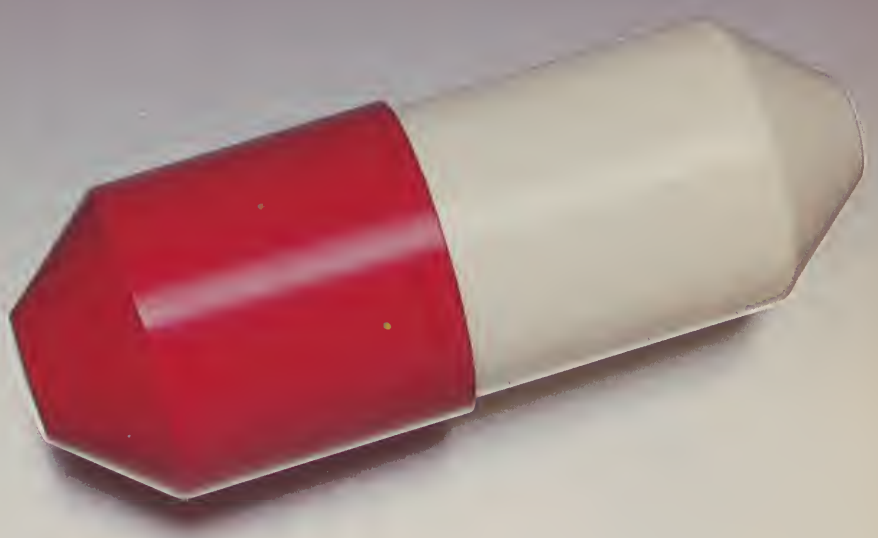
Supplied: 'Dyazide' is supplied as a red and white capsule, in bottles of 1000 capsules; Single Unit Packages (unit-dose) of 100 (intended for institutional use only); in Patient-Pak™ unit-of-use bottles of 100.

BRS-DZ L42

In Hypertension*... When You Need to Conserve K^+

Remember the Unique Red and White Capsule: Your Assurance of SK&F Quality

Serum K^+ and BUN should be checked periodically (see Warnings and Precautions)



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25 mg Hydrochlorothiazide/**50 mg** Triamterene/SKF

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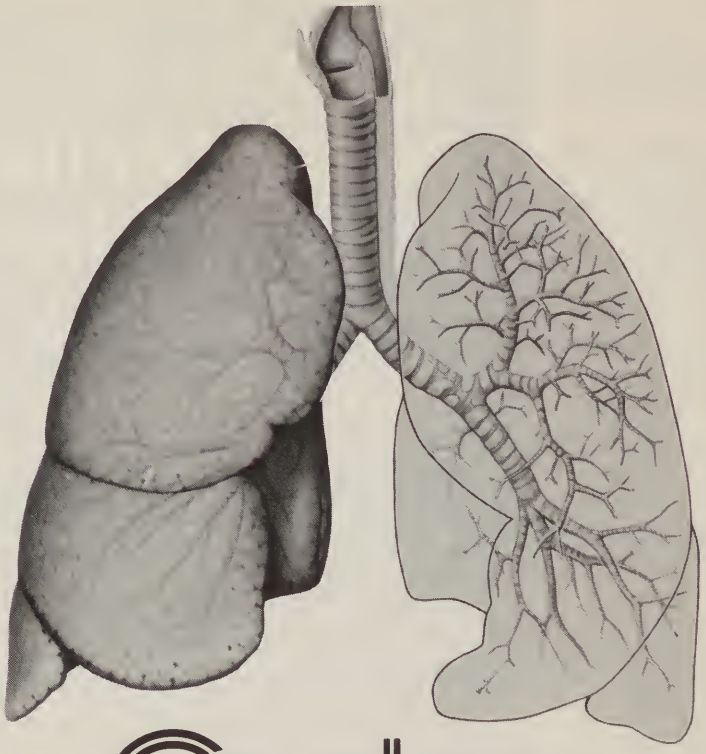
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Consider the causative organisms...



Ceclor®
cefaclor

250-mg Pulvules® t.i.d. offers effectiveness against the major causes of bacterial bronchitis

Haemophilus influenzae and *Streptococcus pneumoniae*
(ampicillin-susceptible and ampicillin-resistant)

Note: Ceclor is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

Ceclor® (cefaclor)

Summary. Consult the package literature for prescribing information.

Indication: Lower respiratory infections, including pneumonia, caused by *Streptococcus pneumoniae*, *Haemophilus influenzae*, and *Streptococcus pyogenes* (group A β-hemolytic streptococci).

Contraindication:
Known allergy to cephalosporins.

Warnings:
CECLOR SHOULD BE ADMINISTERED CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS. PENICILLINS AND CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY. POSSIBLE REACTIONS INCLUDE ANAPHYLAXIS.

Administer cautiously to allergic patients.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

Precautions:
- Discontinue Ceclor in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of nonsusceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients.

Adverse Reactions: (percentage of patients)
Therapy-related adverse reactions are uncommon. Those reported include:
- Gastrointestinal (mostly diarrhea): 2.5%.
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, and serum-sickness-like reactions that have included erythema multiforme [rarely, Stevens-Johnson syndrome] or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever): 1.5%; usually subside within a few days after cessation of therapy. Serum-sickness-like reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Ceclor. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.
- Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.
- As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
- Rarely, reversible hyperactivity, nervousness, insomnia, confusion, hypertonia, dizziness, and somnolence have been reported.
- Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1%; and, rarely, thrombocytopenia.

Abnormalities in laboratory results of uncertain etiology
- Slight elevations in hepatic enzymes.
- Transient fluctuations in leukocyte count (especially in infants and children).
- Abnormal urinalysis; elevations in BUN or serum creatinine.
- Positive direct Coombs' test.
- False-positive tests for urinary glucose with Benedict's or Fehling's solution and Clinitest® tablets but not with Tes-Tape® (glucose enzymatic test strip, Lilly). [061787L]

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Lilly

Additional information available to the profession on request from Eli Lilly and Company, Indianapolis, Indiana 46285.

Eli Lilly Industries, Inc
Carolina, Puerto Rico 00630



ZOVIRAX®
(acyclovir)
CAPSULES

Prevent genital herpes recurrences month after month with daily therapy.

(In controlled studies, recurrences were totally prevented for 4 to 6 months in up to 75% of patients.)

Please see last page of this advertisement for brief summary of prescribing information

ZOVIRAX® (acyclovir) CAPSULES

Help free your patients from recurrences.

Daily therapy

Coping with genital herpes is rarely easy. For some, the worst part is the pain and discomfort of frequent attacks—month after month, year after year. For others, the emotional burden presents a more difficult problem, leading to social isolation, anxiety, and diminished self-esteem.

Prevent or reduce recurrences

Although your patients have to live with herpes, they shouldn't have to suffer. Daily therapy with ZOVIRAX CAPSULES can help free them from the cycle of recurrent genital herpes. For many, one capsule three times a day can suppress recurrences completely while on therapy.

Generally well tolerated

Daily therapy with ZOVIRAX CAPSULES is generally well tolerated. The most frequent adverse reactions reported during clinical trials were headache, diarrhea, nausea/vomiting, vertigo, and arthralgia.

The physical and emotional difficulties posed by genital herpes are unique for each patient. The frequency and severity of recurrent episodes, as well as the emotional impact of the disease, should be considered when selecting daily therapy with ZOVIRAX CAPSULES.

Please see brief summary of prescribing information on next page.



Prevent recurrences month after month*

ZOVIRAX® (acyclovir) CAPSULES

Brief Summary

INDICATIONS AND USAGE: Zovirax Capsules are indicated for the treatment of initial episodes and the management of recurrent episodes of genital herpes in certain patients.

The severity of disease is variable depending upon the immune status of the patient, the frequency and duration of episodes, and the degree of cutaneous or systemic involvement. These factors should determine patient management, which may include symptomatic support and counseling only, or the institution of specific therapy. The physical, emotional and psycho-social difficulties posed by herpes infections as well as the degree of debilitation, particularly in immunocompromised patients, are unique for each patient, and the physician should determine therapeutic alternatives based on his or her understanding of the individual patient's needs. Thus Zovirax Capsules are not appropriate in treating all genital herpes infections. The following guidelines may be useful in weighing the benefit/risk considerations in specific disease categories:

First Episodes (primary and nonprimary infections — commonly known as initial genital herpes):

Double-blind, placebo-controlled studies have demonstrated that orally administered Zovirax significantly reduced the duration of acute infection (detection of virus in lesions by tissue culture) and lesion healing. The duration of pain and new lesion formation was decreased in some patient groups. The promptness of initiation of therapy and/or the patient's prior exposure to Herpes simplex virus may influence the degree of benefit from therapy. Patients with mild disease may derive less benefit than those with more severe episodes. In patients with extremely severe episodes, in which prostration, central nervous system involvement, urinary retention or inability to take oral medication require hospitalization and more aggressive management, therapy may be best initiated with intravenous Zovirax.

Recurrent Episodes:

Double-blind, placebo-controlled studies in patients with frequent recurrences (6 or more episodes per year) have shown that Zovirax Capsules given for 4 to 6 months prevented or reduced the frequency and/or severity of recurrences in greater than 95% of patients. Clinical recurrences were prevented in 40 to 75% of patients. Some patients experienced increased severity of the first episode following cessation of therapy; the severity of subsequent episodes and the effect on the natural history of the disease are still under study.

The safety and efficacy of orally administered acyclovir in the suppression of frequent episodes of genital herpes have been established only for up to 6 months. Chronic suppressive therapy is most appropriate when, in the judgement of the physician, the benefits of such a regimen outweigh known or potential adverse effects. In general, Zovirax Capsules should not be used for the suppression of recurrent disease in mildly affected patients. Unanswered questions concerning the human relevance of *in vitro* mutagenicity studies and reproductive toxicity studies in animals given very high doses of acyclovir for short periods (see Carcinogenesis, Mutagenesis, Impairment of Fertility) should be borne in mind when designing long-term management for individual patients. Discussion of these issues with patients will provide them the opportunity to weigh the potential for toxicity against the severity of their disease. Thus, this regimen should be considered only for appropriate patients and only for six months until the results of ongoing studies allow a more precise evaluation of the benefit/risk assessment of prolonged therapy.

Limited studies have shown that there are certain patients for whom intermittent short-term treatment of recurrent episodes is effective. This approach may be more appropriate than a suppressive regimen in patients with infrequent recurrences.

Immunocompromised patients with recurrent herpes infections can be treated with either intermittent or chronic suppressive therapy. Clinically significant resistance, although rare, is more likely to be seen with prolonged or repeated therapy in severely immunocompromised patients with active lesions.

CONTRAINDICATIONS: Zovirax Capsules are contraindicated for patients who develop hypersensitivity or intolerance to the components of the formulation.

WARNINGS: Zovirax Capsules are intended for oral ingestion only.

PRECAUTIONS: General: Zovirax has caused decreased spermatogenesis at high doses in some animals and mutagenesis in some acute studies at high concentrations of drug (see PRECAUTIONS — Carcinogenesis, Mutagenesis, Impairment of Fertility). The recommended dosage and length of treatment should not be exceeded (see DOSAGE AND ADMINISTRATION).

Exposure of Herpes simplex isolates to acyclovir *in vitro* can lead to the emergence of less sensitive viruses. The possibility of the appearance of less sensitive viruses in man must be borne in mind when treating patients. The relationship between the *in vitro* sensitivity of Herpes simplex virus to acyclovir and clinical response to therapy has yet to be established.

Because of the possibility that less sensitive virus may be selected in patients who are receiving acyclovir, all patients should be advised to take particular care to avoid potential transmission of virus if active lesions are present while they are on therapy. In severely immunocompromised patients, the physician should be aware that prolonged or repeated courses of acyclovir may result in selection of resistant viruses which may not fully respond to continued acyclovir therapy.

Drug Interactions: Co-administration of probenecid with intravenous acyclovir has been shown to increase the mean half-life and the area under the concentration-time curve. Urinary excretion and renal clearance were correspondingly reduced.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Acyclovir was tested in lifetime bioassays in rats and mice at single daily doses of 50, 150 and 450 mg/kg given by gavage. There was no statistically significant difference in the incidence of tumors between treated and control animals, nor did acyclovir shorten the latency of tumors. In 2 *in vitro* cell transformation assays, used to provide preliminary assessment of potential oncogenicity in advance of these more definitive life-time bioassays in rodents, conflicting results were obtained. Acyclovir was positive at the highest dose used in one system and the resulting morphologically transformed cells formed tumors when inoculated into immunosuppressed, syngeneic, weanling mice. Acyclovir was negative in another transformation system considered less sensitive.

In acute studies, there was an increase, not statistically significant, in the incidence of chromosomal damage at maximum tolerated parenteral doses of 100 mg/kg acyclovir in rats but not Chinese hamsters; higher doses of 500 and 1000 mg/kg were clastogenic in Chinese hamsters. In addition, no activity was found after 5 days dosing in a dominant lethal study in mice. In 6 of 11 microbial and mammalian cell assays, no evidence of mutagenicity was observed. At 3 loci in a Chinese hamster ovary cell line, the results were inconclusive. In 2 mammalian cell assays (human lymphocytes and L5178Y mouse lymphoma cells *in vitro*), positive responses for mutagenicity and chromosomal damage occurred, but only at concentrations at least 400 times the acyclovir plasma levels achieved in man.

Acyclovir has not been shown to impair fertility or reproduction in mice (450 mg/kg/day, p.o.) or in rats (25 mg/kg/day, s.c.). At 50 mg/kg/day s.c. in the rat, there was a statistically significant increase in post-implantation loss, but no concomitant decrease in litter size. In female rabbits treated subcutaneously with acyclovir subsequent to mating, there was a statistically significant decrease in implantation efficiency but no concomitant decrease in litter size at a dose of 50 mg/kg/day. No effect upon implantation efficiency was observed when the same dose was administered intravenously. In a rat peri- and postnatal study at 50 mg/kg/day s.c., there was a statistically significant decrease in the group mean numbers of corpora lutea, total implantation sites and live fetuses in the F_1 generation. Although not statistically significant, there was also a dose related decrease in group mean numbers of live fetuses and implantation sites at 12.5 mg/kg/day and 25 mg/kg/day, s.c. The intravenous administration of 100 mg/kg/day, a dose known to cause obstructive nephropathy in rabbits, caused a significant increase in fetal resorptions and a corresponding decrease in litter size. However, at a maximum tolerated intravenous dose of 50 mg/kg/day in rabbits, there were no drug-related reproductive effects.

Intraperitoneal doses of 320 or 80 mg/kg/day acyclovir given to rats for 1 and 6 months, respectively, caused testicular atrophy. Testicular atrophy was persistent through the 4-week postdose recovery phase after 320 mg/kg/day; some evidence of recovery of sperm production was evident 30 days postdose. Intravenous doses of 100 and 200 mg/kg/day acyclovir given to dogs for 31 days caused aspermatogenesis. Testicles were normal in dogs given 50 mg/kg/day, i.v. for one month.

Pregnancy: ***Teratogenic Effects:*** Pregnancy Category C. Acyclovir was not teratogenic in the mouse (450 mg/kg/day, p.o.), rat (50 mg/kg/day, s.c.) or rabbit (50 mg/kg/day, s.c. and i.v.). There are no adequate and well-controlled studies in pregnant women. Acyclovir should not be used during pregnancy unless the potential benefit justifies the potential risk to the fetus. Although acyclovir was not teratogenic in animal studies, the drug's potential for causing chromosome breaks at high concentration should be taken into consideration in making this determination.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when Zovirax is administered to a nursing woman. In nursing mothers, consideration should be given to not using acyclovir treatment or discontinuing breastfeeding.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS — Short-Term Administration: The most frequent adverse reactions reported during clinical trials were nausea and/or vomiting in 8 of 298 patient treatments (2.7%) and headache in 2 of 298 (0.6%). Less frequent adverse reactions, each of which occurred in 1 of 298 patient treatments (0.3%), included diarrhea, dizziness, anorexia, fatigue, edema, skin rash, leg pain, inguinal adenopathy, medication taste and sore throat.

Long-Term Administration: The most frequent adverse reactions reported in studies of daily therapy for 3 to 6 months were headache in 33 of 251 patients (13.1%), diarrhea in 22 of 251 (8.8%), nausea and/or vomiting in 20 of 251 (8.0%), vertigo in 9 of 251 (3.6%), and arthralgia in 9 of 251 (3.6%). Less frequent adverse reactions, each of which occurred in less than 3% of the 251 patients (see number of patients in parentheses), included skin rash (7), insomnia (4), fatigue (7), fever (4), palpitations (1), sore throat (2), superficial thrombophlebitis (1), muscle cramps (2), pars planitis (1), menstrual abnormality (4), acne (3), lymphadenopathy (2), irritability (1), accelerated hair loss (1), and depression (1).

DOSAGE AND ADMINISTRATION: Treatment of initial genital herpes: One 200 mg capsule every 4 hours, while awake, for a total of 5 capsules daily for 10 days (total 50 capsules).

Chronic suppressive therapy for recurrent disease: One 200 mg capsule 3 times daily for up to 6 months. Some patients may require more drug, up to one 200 mg capsule 5 times daily for up to 6 months.

Intermittent Therapy: One 200 mg capsule every 4 hours, while awake, for a total of 5 capsules daily for 5 days (total 25 capsules). Therapy should be initiated at the earliest sign or symptom (prodrome) of recurrence.

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Giardiasis: Case Report and Discussion

NEIL D. GOLDBERG MD and HARRY NERVINO MD

***Giardia lamblia* is distributed worldwide and is a common cause of infectious diarrhea in the United States. Giardiasis must be considered with either mild or severe diarrhea and may be associated with malabsorption and steatorrhea.**

From the Department of Medicine, Maryland General Hospital, Baltimore.

Giardiasis should be considered with symptoms of upper abdominal pain, bloating, and diarrhea in travelers from foreign countries or the Rocky Mountain states. The symptoms may be self-limiting or chronic, and the organism is transmitted via the fecal-oral route. Diagnostic testing is indicated to properly identify *Giardia lamblia*, and appropriate treatment is very successful.

Case Report

A twenty-year-old caucasian male presented with a one-month history of progressive abdominal cramping and periumbilical burning with bloating. One week after the initial symptoms, he experienced worsening of abdominal cramping, decreased appetite, but no associated fevers, chills, nausea, or vomiting. Shortly thereafter, he developed liquid stools in excess of two to three per day and continuing for several weeks. He denied bloody or mucoid stools and stated there had been no constipation, urticaria, nausea, or vomiting. He admitted to fatigue and anorexia and had lost five to ten pounds in three weeks.

His medical history was negative for peptic ulcer disease, hepatitis, pancreatitis, and alcohol or aspirin abuse. There was no history of camping, foreign travel, or drinking well water.

Physical examination revealed a well-developed but somewhat thin, white male with an oral temperature of 98.6°F, blood pressure is 120/78 mm Hg, the pulse rate 72/min, and respiratory rate of 18/min. His head, eyes, ears, nose, and throat were normal. His neck was without adenopathy or thyromegaly, and there was no supraclavicular or axillary adenopathy. The patient's lungs were clear to percussion and auscultation; cardiac examination was without murmur, gallop, or rub. His abdomen was soft and nondistended, with normal bowel sounds and no guarding or palpable masses. There was periumbilical and right lower quadrant tenderness. The rectal examination revealed no tenderness or masses, and the stool was hemoccult negative. His extremities were without cyanosis, clubbing, or edema; pulses were symmetrically intact, and the neurological testing was within normal limits. No skin rash or other abnormalities were noted.

The UGI was normal with no evidence of hiatal hernia or peptic ulcer disease. The small bowel revealed edema of the mucosal folds with nodularity throughout the jejunum and ileum (Figure 1). There was no evidence of strictures, obstruction, diverticulum, or focal mass. Lymphoma was suggested.

Laboratory studies revealed Hgb 16.3 g/dl, hematocrit 48.0%, leukocyte count 11,200/mm with normal differential. The glucose was 81 mg/dl, BUN 13 mg/dl, creatinine 1.1 mg/dl, NA 143 meq/1, K 4.3 meq/1, Cl 105 meq/1, CO_2 30 meq/1, SGPT 57 u/1, SGOT 33 u/1, alkaline phosphatase 98 u/1, sed rate of 1. A small bowel biopsy with concomitant giardia aspirate was performed and found positive for G. lamblia trophozoites. Stools subsequently were also positive for giardia cysts.

The patient was placed on Flagyl 250 mgs. p.o. t.i.d. for 10 days. Thereafter, his abdominal symptoms resolved, his appetite improved, and he began to gain weight. He was able to return to his normal activities without any further complaints. A follow-up small bowel series obtained two months later showed it had reverted to a normal mucosal pattern (Figure 2).

Discussion

The protozoan *G. lamblia* is the most common pathogenic parasite in the United States. As international travel increases, giardiasis has become one of the most common intestinal parasitic infections in the world. Giardiasis is recognized in third world and industrial-



Figure 1. Edema and nodularity of terminal ileum.



Figure 2. Normal terminal ileum following metronidazole therapy.

ized countries alike. In the United States, giardiasis has been most recognized in Utah, Colorado, Oregon, Washington, New Hampshire, Vermont, and New York.[1]

G. lamblia is a flagellate protozoa that exits as either an actively feeding trophozoite found in duodenal aspirates, feces, and intestinal biopsy specimens or as a cyst found in feces.

The cysts are acid resistant, pass the acid barrier of the stomach, and may survive for months in wet stool or in water. Trophozoites are produced in the small intestine by binary fission, inhabiting the duodenum and proximal jejunum in humans. The trophozoites die within hours outside the environment of the body. They are generally found in the stool only during episodes of severe diarrhea.

The cysts are oval, have two to four nuclei, and are smaller than the trophozoites. The highly motile trophozoite is crescent shaped and has four beating pairs of flagella and two anterior nuclei. There is a central suction disc of the ventral surface that permits attachment to the intestinal mucosa.

Several mechanisms of intestinal dysfunction by *G. lamblia* are suggested. There may be mechanical irritation of the microvilli by the ventral sucking disc of the trophozoite, which can impede the absorption of disaccharides. Mechanical obstruction of the microvilli by the trophozoites and invasion of the intestinal mucosa and submucosa of the proximal portion of the intestine may lead to diarrhea.

Giardiasis has been associated with achlorhydria, lactase deficiency, hypogammaglobulinemia, and previous gastric resection in association with giardiasis. Children are more prone to infection than are adults and may present with more permanent clinical manifestations. Malnourished individuals have an increased susceptibility to acute or chronic giardiasis. It is the most common cause of diarrhea and steatorrhea in patients with immunodeficiency syndrome and is prevalent in homosexual males.

The mode of transmission is fecal-oral transmission of viable cysts. The time interval between infection and onset of acute symptoms varies from days to three weeks. Giardial cysts can resist 0.5 percent concentration of chlorine usually found in tap water.[2] The cysts can remain viable in aerated tap water at 8°C for as long as two weeks, but they are destroyed by heating water at 50°C or by adding iodine compounds to water. Ingestion of contaminated, uncooked food is another mode of transmission.

The clinical manifestations of giardiasis cover a broad spectrum of duration and intensity. Twenty-five percent of infections are asymptomatic, while other patients become profoundly ill and require hospitaliza-

tion. The patients may develop acute, subacute, or chronic infestations.

The most prominent symptoms include diarrhea, bloating, and vague upper abdominal discomfort. The diarrhea may be explosive, malodorous, and can contain mucus but not blood or pus. Rare patients have constipation rather than diarrhea.

Subacute infections frequently resemble peptic ulcer disease, reflux esophagitis, cholecystitis or gastrointestinal malignancy. These patients have the symptoms of acute infection plus belching, weight loss, fatigue, and occasional urticaria.

Chronic giardiasis may last for years. It is characterized by periodic episodes of soft, foul-smelling stools, flatulence, distension, malaise, and weight loss.

A history of homosexuality should raise the suspicion of giardiasis particularly if oral/anal sex is practiced. Keystone *et al.* isolated *g. lamblia* from 13 percent of homosexual men and only 3 percent of heterosexual men.

Intestinal giardiasis may present with uveitis, iridocyclitis, or choroditis with or without any associated gastrointestinal symptoms.[4]

Giardiasis is overlooked for two reasons: it is not included in the differential diagnosis, and cysts and trophozoites are frequently not present in the stool. A history of travel to a highly endemic region (the Rocky Mountains or Leningrad) or the consumption of well water should raise the spector of giardiasis. Epigastric pain associated with bloating and diarrhea is a classic presentation.

An effort should be made to obtain three liquid stools for ova and parasites. If the stools are solid and giardiasis is still a consideration, the administration of citrate of magnesia will reduce the gut transit time and increase the likelihood of a diagnostic stool. Solid stools are much less likely to contain cysts or trophozoites. Antibiotics, antacids, antidiarrheal compounds, enemas, or laxatives and **barium** may interfere with the identification of giardia cysts and trophozoites in the stool.

If stools are negative times three, one may proceed with a small bowel aspirate and biopsy, duodenal aspirate, or a string test (entero-test (R)). The string test is performed with an opaque gelatin capsule packed with 140 cm of a three-ply nylon thread.[5] The weighted gelatin capsule containing the string is swallowed. The protruding initial length of the string is held free and taped to the patient's face. The gelatin capsule will dissolve in the stomach and the thread attached to a weight will pass into the duodenum. After three to four hours, the entire string is removed and the bile-stained mucus is scraped onto a slide and examined for trophozoites. The string test is safe and does not require the technology of a gastroenterology lab.

Duodenal aspirate is accomplished with a Rehfuss' tube under fluoroscopy or may be performed in conjunction with esophagogastroduodenoscopy or biliary/pancreatic drainage if the patient's presentation warrants these additional tests. If endoscopy is performed, it is worthwhile to perform a duodenal biopsy as well as an aspirate.

Small bowel biopsy remains the most sensitive method of diagnosis. When a Crosby capsule is employed, a jejunal aspirate may be obtained simultaneously with small bowel biopsy. If duodenal or small bowel biopsy are obtained, it is worthwhile to make a touch preparation. The touch prep is fixed in formalin or Bouin's solution and then stained with Geimsa or trichrome stain.

Treatment is suggested for the asymptomatic and symptomatic giardiasis patient. The two principal therapies for giardiasis are quinacrine hydrochloride and metronidazole.

Quinacrine has an effective 90 to 95 percent rate of cure and is the drug of choice for those individuals who are symptomatic and who are specimen positive. However, potential side effects include dizziness, headaches, nausea, dermatitis, toxic psychosis, and less commonly, vomiting. Quinacrine in contraindicated in those patients with a history of psoriasis or psychosis. There may be yellow discoloration of the urine and skin. The dosage is 100 mg P.O. t.i.d. for five days.

Metronidazole, although not fully approved for giardiasis, is very effective in a dosage of 250 mg three times daily for five days. In refractory cases, 750 mg P.O. t.i.d. for ten days has been used. Its cure rate approaches 90 percent[6] and should be used in adult asymptomatic carriers and mildly infected symptomatic individuals. Principal side effects include headaches, gastrointestinal upset, and metalic aftertaste. Less commonly dark urine, paresthesias, and dizziness may be experienced. There should be no ingestion of alcohol with this drug because of its potential disulfiram type effect.

Quinacrine and metronidazole are contraindicated during the first trimester of pregnancy. These drugs should be used during the second and third trimesters only with severely symptomatic females.

Furazolidone is available in tablet and suspension forms. Thus, it is effective and well tolerated by children and, therefore, the drug of choice for them. Its side effects include hypersensitivity reactions, skin rashes, gastrointestinal upset, and disulfiramlike effects with alcohol ingestion. Its association with mammary tumors has been questioned. Reversible intravascular hemolysis in blacks has been noted, and it is not advised for use in pregnant women. The recommended dosage for adults is 100 mg four times daily for seven days. The pediatric dosage is adjusted according to the child's age

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and weight.

Although not available in the United States, Tinidazole is highly effective and may be given as a single 1.5 gm dose.

Prevention of giardiasis requires good hygiene to obviate person-to-person transmission. Giardial cysts may be resistant to concentration of chloride present in public water systems,[7] and filtration is a principal means of eradication. Boiling of water renders giardiasis noninfectious. Hikers or individuals traveling to suspect areas should treat the drinking water with iodination and chlorination-based water treatments and should avoid ice and other beverages made from tap water as well as unpeeled or uncooked vegetables.

Stool specimens should be examined one month after initial treatment. If the stool specimen reveals giardiasis, a second course of treatment should be pursued.

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Physicians Liable for Inaccurate or Nontimely Completion of Insurance Forms

ROBERT E. MAZER

Readers may be startled to learn they may be liable if they do not complete a patient's insurance form in a timely fashion or accurately, notwithstanding that they have no intent to mislead anyone or to obtain excessive insurance payments. Many will find this particularly surprising since they do not charge for the service.

Mr. Mazer is a Senior Associate with the law firm of Ober, Kaler, Grimes and Shriver in Baltimore, where he specializes in the representation of health-care providers. He is also co-chairman of the joint seminar sponsored by the Maryland Association of Certified Public Accountants and National Health Lawyers Association addressing financial representation of physicians and other noninstitutional health-care providers.

Over the last two decades, physicians have been at once shocked, dismayed, and enraged at what many believe is an unfounded and ill-advised expansion of physician's traditional malpractice liability.[1] While many physicians are resigned to this unfortunate trend, two recent decisions have startled even the most resilient practitioner. These cases have opened the door to a new and dangerous source of liability, suits alleging the negligent or untimely completion of patients' insurance forms.[2] As discussed below, the specter of such claims is exceedingly ominous because of the magnitude of damages that may be recoverable.[3]

[1] For example, suits for lack of informed consent became commonplace after a series of decisions in the early to mid-1970s required that the information provided by the physician be based on the patient's need, rather than the physician's medical judgment. More recently, starting with California, a number of states have ruled that psychotherapists have a duty to warn identifiable third parties who may be in danger of being harmed by the psychotherapist's patient.

[2] This article does not address the inaccurate completion of claim forms in order to obtain payment to which a physician is not entitled. Physicians guilty of such practices are subject to criminal and civil sanctions, including penalties under the Medicare Anti-Fraud and Abuse statutes. For example, a physician is liable for Civil Monetary Penalties if it is determined that he knew or had reason to know that a claim for payment submitted by him or one of his employees was improper. In such case, the Secretary of Health and Human Services is authorized to impose a penalty of up to $2,000 for each such claim and to assess the physician in an amount up to twice the amount claimed. Recent legislation also provides for possible suspension from the Medicare and Medicaid programs of any physician who could be assessed Civil Monetary Penalties.

[3] The type of cases described in this article are particularly frightening because it is not difficult to imagine an insurance carrier taking the position that a suit based on improper or nontimely completion of insurance forms is not covered by physicians' liability insurance policies covering damages "caused by a medical incident or arising out of professional services." Conversely, it is quite possible that insurance carriers providing commercial liability insurance, covering liability arising from acts which do not constitute professional malpractice, may take the opposite position and argue that such damage claims arise from "professional services" excluded under the policy. Thus, under a "worst case" scenario, a physician could find himself in the position where neither of his insurance carriers will defend him in the law suit or indemnify him for any damages assessed against him.

Chew v *Meyer*

In *Chew* v *Meyer*, No. 1481 (July 10, 1987), the Maryland Court of Special Appeals took a dramatic step toward the expansion of physicians' liability resulting from the completion of insurance forms. In that case, the plaintiff alleged that his employer fired him because of an unexcused or unexplained absence from work, due to his physician's failure to provide the employer with a signed insurance form in a timely manner.

More specifically, the patient's employer required all employees who missed work to provide a written explanation for the absence, signed by a physician, within 15 days of the last day worked. An insurance form signed by the physician was deemed sufficient for this purpose. The plaintiff alleged that he informed his physician that a particular insurance form had to be completed and returned to his employer promptly. He also allegedly informed the physician that the physician's failure to provide his employer with the signed form within a week "could cost me my job." The physician, however, did not complete the form until approximately two weeks after the patient's admission to the hospital, and it was not received by the employer until five days later. As a result, the employee was fired. The discharged employee then sued his physician on various legal grounds.

The trial court granted summary judgment in favor of the physician with respect to most of the plaintiff's claims. The patient then appealed the trial court's action to the Court of Special Appeals. The appellate court agreed with the trial court that the physician could not be held liable for the negligent infliction of emotional distress or a breach of his fiduciary duty to the patient. It also determined that there was no evidence to support the patient's allegation that the physician intentionally interfered with the patient's employment contract.

However, the Court held that the plaintiff had alleged a legally sufficient claim that the physician breached the contract with him and was negligent. In broad language with potentially far reaching impact, the Court stated:

> [The plaintiff] has alleged that [the physician] was obligated under the contract between them to complete certain insurance forms for [the patient] and to submit medical information concerning [the plaintiff] to [the plaintiff's] employer. Formerly, such a contention might well have been summarily rejected, on

the basis that a physician's obligation to his patient ordinarily did not extend beyond his duty to use his best efforts to treat and cure. The traditional scope of the contractual relationship between doctor and patient, however, has expanded over the years as a result of the proliferation of health and disability insurance, sick pay and other employment benefits.

Today, the patient commonly, and necessarily, enlists the aid of his or her physician in preparing claims forms for health and disability benefits. Such forms ordinarily require information possessed solely by the treating physician as well as the physician's signature attesting to the bona fides of that medical information. Consequently, [the patient's] assertion that the services [the physician] contracted to perform for [the patient] included the completion and submission of insurance forms in addition to the surgery he performed, combined with an allegation that the doctor failed to complete and submit the document in question in a proper *i.e.*, timely, manner states a plausible cause of action for breach of contract.

The Court further stated that even if the physician's "initial contractual duty to provide medical and surgical treatment did not include the obligation to complete and submit the insurance form, it established a sufficiently 'intimate nexus' to support a claim if [the physician] gratuitously undertook that obligation and then performed it in such a negligent manner that economic loss to [the patient] resulted." The Court, in all likelihood, meant that even if completing the claim form was not part of the original agreement between the physician and patient, once the physician informed the patient that he would complete the form, he was required to do so in a timely fashion or could be held liable if he failed.

The Court emphasized that the plaintiff alleged that the physician or his secretary repeatedly assured him that one of them would attend to the claim form immediately. Similarly, the court stated the physician was aware of the patient's reliance on the physician's assurances and the risk of harm if the claim form was not completed promptly. The Court then remanded the action to the trial court for trial of the plaintiff's claim that he was damaged as a result of the physician's breach of contract and negligence.

Stafford v *Neurological Medicine, Inc.*

A recent decision arising out of a claim in Missouri is even more startling. In *Stafford* v *Neurological Medicine, Inc.*, 811 F.2d 470 (8th Cir. 1987), a federal appellate court upheld a jury award of $200,000 against a physician and the corporation employing him based on the physician's inaccurate completion of a Medicare claim form. Plaintiff in that case alleged that the inaccurate information contained on the form caused his wife, the physician's patient, to commit suicide. The facts giving rise to the suit were as follows: Tests conducted during the patient's hospitalization indicated she had lung cancer but the cancer had not spread to other parts of her body. The patient was given assurances to that effect. During the patient's hospitalization, she received a CT scan to determine whether the cancer had metastasized to her brain. The test revealed no cancer.

In accordance with the instructions of the neurologist interpreting the CT scan, clerical staff of the physician's medical corporation completed the HCFA form 1500, writing the words "brain tumor" as the diagnosis or nature of illness or injury. While, in fact, the patient had no such tumor, the physician instructed his staff to refer to a "brain tumor" because the Medicare Intermediary prohibited the use of a "rule out diagnosis", *i.e.*, "R/O brain tumor." A copy of the form, apparently, was sent by the Intermediary to the patient's secondary insurance carrier and eventually was mailed to the patient's home. The patient read the form and several days later committed suicide. The patient's husband then sued the physician and the medical corporation employing him and received a jury verdict for $200,000. The trial judge refused to accept the jury's verdict and granted judgment in favor of the physician and medical corporation. The trial judge also "conditionally" granted a new trial. The patient then appealed.

The Court of Appeals held that the jury verdict was entirely proper and should have been accepted by the judge. The Court concluded that the jury could have reasonably concluded that the medical corporation did or should have foreseen a significant possibility that its patients would ultimately see a copy of their Medicare claim form and that there was evidence "tending to prove the foreseeability of harm to [the particular patient] if she did receive the diagnosis." Accordingly, the $200,000 verdict against the physician and medical corporation became final.

Conclusion

Physicians are now at risk of being sued not only for providing negligent medical care or obtaining a "bad result" but also for being negligent in their "paperwork." In many cases, competent legal counsel will be able to defeat such claims or, if necessary, convince the physician's insurance carrier to defend and/or indemnify the physician for any losses. However, "preventive medicine" is clearly the best weapon against such claims. Quite simply, billing and completing insurance forms is too important to be left solely to the attention of billing clerks. Physicians must pay close attention to the administrative aspects of their practice as well as to its clinical aspects. Otherwise, notwithstanding the provision of good medical care, they may be the subject of a suit for negligent paperwork.

More on *Stafford* v *Neurological Medicine, Inc.*

JAMES G. ZIMMERLY MD, JD, MPH

The *Stafford* case referred to by Robert E. mazer in the preceding article is an example of a difficult case making bad law. In *Stafford* the plaintiffs had to prove the physicians' alleged negligent act (that is, writing the words "brain tumor" on the HCFA Form 1500 and sending it to the insurance company) could "be reasonably regarded as a direct cause or producing cause" of the plaintiff's injury. Under Missouri law, when a person's actions cause a victim to become "insane and bereft of reason" and the victim involuntarily commits suicide, the person's actions can constitute the proximate cause of the death. Missouri case law holds that "an irresistible impulse" is one form of insanity that could lead to an involuntary suicide.

In the *Stafford* case an expert in geriatric psychiatry testified that the suicide resulted from such an irresistable impulse and that the impulse was the product of an impulse control disorder caused by the patient's learning of the "diagnosis" of her brain tumor. The jury elected to find the plaintiff's expert testimony more credible than that of the defense experts.

The plaintiff's expert also testified elderly patients are particularly susceptible to harm resulting from stressful events, such as the receipt of a medical form containing a diagnosis of brain tumor. The defendants testified they would not intentionally give such incorrect information to a patient and would be very concerned about a person receiving such information. The jury concluded the defendants should have foreseen the significant possibilities that the patient would suffer harm if she received the diagnosis and that the insurance company might send copies of the form to the patient.

The defendants argued that the insurance company's policy, which did not permit a "rule-out diagnosis" to be used, was long-standing and for them to disobey the insurance company's policy constituted an unreasonable burden. The defendant physicians testified they did not feel comfortable using a less-than-accurate diagnosis, however, the insurance company's policy, in order to pay a claim, necessitated this type of documentation.

The physicians lost because they were not able to prove they had been unsuccessful in attempts to convince the insurance company to alter it's policy. In fact, the insurance company had paid claims where a "rule-out diagnosis" was used in other cases. The defendants argued that the insurance company's prohibition applied only to diagnoses resulting from CT scans. The jury concluded that since the insurance company's policy was flexible enough to permit a "rule-out diagnosis" for other conditions, the defendant physicians could have challenged the insurance company's policy on CT scans. Lacking any proof they had unsuccessfully challenged the insurance company, the defendants lost on this issue.

The lessons for Maryland physicians from this case are several. If an insurance company refuses to pay a claim for a "rule-out diagnosis," the physician should challenge that policy and keep records of the challenge. One would not expect a reasonable patient to take his or her life after reading a sketchy insurance claim document. A reasonable person would get in contact with the physician to question the recorded diagnosis. The idea that we have a right to expect a reasonable patient in our practices may be in error. In those instances where the patient turns out to be unreasonable and institutes litigation for whatever reason, one may be naive to expect a reasonable defense effort on your behalf. The final lesson is not to practice medicine in Missouri.

In January *MMJ* will focus on the 1988 Maryland General Assembly. Articles highlight anticipated major issues as well as practical legislative information for the individual physician, and a tear-out legislative directory is included.

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Plasmapheresis–A Therapeutic Tool in Neurological Disorders

CAROL LEE KOSKI MD

Plasmapheresis is a procedure in which toxic elements of the blood, including immunoreactive components, are removed while the cellular components of blood are returned to the patient. During the last decade the relative importance of this therapeutic tool in a variety of neurological disorders has become apparent since autoantibodies to neural tissues have been implicated in their pathogenesis.

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During the plasmapheresis procedure, blood is taken from a patient and the cellular components are returned. The removal of plasma effectively eliminates autoantibodies, immune complexes, circulating antigens, and other plasma components active in immune processes. Therefore, plasmapheresis is being used as a therapeutic tool in numerous disorders where autoimmunity is presumed to play a role. Neurologic disorders are no exception since autoantibodies to various neural tissues have been implicated in the pathophysiology of several disorders including myasthenia gravis, Guillain-Barré syndrome, Lambert-Eaton syndrome, paraprotein associated neuropathy, and multiple sclerosis. The views in this article are supported by a recent consensus conference on The Utility of Plasmapheresis for Neurological Disorders held under the auspices of the National Institutes of Health.

Myasthenia Gravis

Perhaps the best understood of these autoimmune neurological disorders is myasthenia gravis (MG) where IgM and IgG antibodies bind primarily to the alpha subunit of the acetylcholine receptor (AChR) in the postsynaptic membrane of the neuromuscular junction and lead to either the blockage and/or destruction of receptors through complement activation. Blockade of nerve impulse transmission across the junction results in the clinical fatigue and variable weakness seen in these patients. Similar symptoms can be induced in experimental animals by immunization with AChR from electric fish, rat, fetal calf, or human sources or with passive transfer of anti-AChR Ab to a naive animal. In these models, the Ab induction leads to loss of AChR and increased turnover of the receptor population. In humans, although the absolute serum titers of anti-AChR antibody do not correlate well with the severity of disease and occasional patients with generalized MG are Ab negative, for the most part increasing antibody titer in a patient correlates with increasing clinical symptomatology and decreasing titer with clinical improvement.

Initial therapy in MG is not directed toward decreasing the immune response but to increasing the acetylcholine concentration at the neuromuscular junction. The neurotransmitter, acetylcholine, the natural ligand for the AChR is protected from enzymatic breakdown with drugs such as mestinon (180 to 360 mg in divided doses/day) and prostigmin (45 to 90 mg in divided doses/day). With continued worsening, most patients will require immunosuppression with either thymectomy, corticosteriods, cytotoxic agents, and/or plasmapheresis.[1]

The first report of short-term improvement following plasmapheresis in MG was published in 1976 by Pinching *et al.*[2] Other studies also supported its usefulness and correlated improved muscle strength with decreased titers of anti-AChR Ab. Plasma therapy is usually given in courses of five to six treatments over a five to ten day period. In each exchange, the plasma equivalent to 40 to 55 ml/Kg body weight is removed and replaced by 5 percent albumin in physiologic saline. The previous practice of volume replacement with human plasma is no longer done because of risk of HIV and other viral infection. The response to plasmapheresis is variable but typically occurs one to three days following the initial exchange and reaches its peak three days after the last exchange. The duration of effect usually does not exceed four to five weeks and often is followed by a rebound in the serum Ab titer.

Plasmapheresis most frequently is reserved for patients with generalized MG in crisis requiring respiratory assistance and/or nasogastric intubation. It routinely reduces time required on a ventilator and monitoring in an intensive care unit. It also benefits patients undergoing high-dose induction with corticosteroids or can optimize a patient's clinical status prior to thymectomy. Because of anti-AChR Ab rebound following plasmapheresis and the chronicity of the autoimmune response in MG, immunosuppression is added to maintain the short-term improvement gained with the plasma therapy. Without immunosuppression the anti-AChR can rebound to even higher titers, worsening in the patient's clinical symptoms.

The risks of plasmapheresis in the hands of an experienced team are generally minor but can include cardiac arrythmia from electrolyte imbalance, citrate-induced hypocalcemia, infection and thrombosis at the site of venous access, allergic reactions leading to anaphylaxis, and activation of coagulation, complement, fibrinolytic cascades, and/or aggregation of platelets. During the course of plasma therapy patients are partially anticoagulated due to loss of clotting factors (removed with plasma) and are subject to hemorrhage.

Lambert-Eaton syndrome (LES) is another disorder of the neuromuscular junction characterized by fatigue, muscle weakness, depressed tendon reflexes, and autonomic dysfunction associated in 65 percent of cases with an oat cell carcinoma of lung. Passive transfer of serum IgG from these patients into mice produces electrophysiologic changes compatible with decreased quantal content of acetylcholine at the neuromuscular junction and suggests that serum IgG of patient serum blocks Ca^{++} channel determinants of the presynaptic junction. Reduction and disorganization of active zone particles thought to represent Ca^{++} channels can be demonstrated by freeze fracture electron microscopy of the neuromuscular junction of both patients with LES and mice with experimental LES.[3] Plasmapheresis in most of these patients results in both clinical and electrophysiologic improvement within two weeks and usually is given in combination with immunosuppressive drugs (prednisone and azathioprine).[4] In those patients with oat cell carcinoma, appropriate chemotherapy of the tumor can result in dramatic and rapid resolution of the clinical syndrome.

Guillain-Barré Syndrome and Other Demyelinating Neuropathies

Several randomized and controlled studies have demonstrated that plasma therapy is useful in both acute and chronic demyelinating neuropathies such as the Guillain-Barré syndrome (GBS) and chronic recurrent polyneuritis. The GBS is a monophasic illness in which a subacute lower motor neuron paralysis develops due to an inflammatory demyelination of peripheral nerve. The mechanism by which the immune system affects demyelination is not known, but a substantial body of evidence suggests Ab and complement play a role. Complement fixing antibodies to peripheral nerve myelin (anti-PNM Ab) can be detected in the serum of most GBS acute-phase patients and are always highest when the patient is first seen early in the clinical course.[5] Clearance of IgM anti-PNM Ab from the serum correlates with improvement in pulmonary vital capacity and muscular strength.[6] Complement activation products can be detected in cerebrospinal fluid, serum, and peripheral nerve of GBS patients, and the kinetics correlate with the presence of anti-PNM Ab. The standard therapy in GBS is primarily supportive care since 85 percent of these patients will obtain a full and functional recovery. Recently, however, three independent multicenter randomized and controlled trials showed that plasmapheresis during the first two weeks following onset of neurologic signs in GBS significantly shortened patients' time on a respirator, time to independent ambulation, and total length of hospitalization.[7–9] Further analysis of this data suggested that plasmapheresis significantly reduced the morbidity associated with this disorder in elderly patients, improving their prognosis to that of a patient 20 years younger.

A course of plasmatherapy in GBS is similar to that used in myasthenia gravis with five to six exchanges during a ten-day period. In the large North American multicenter trial, no increased morbidity or mortality in patients was associated with plasmapheresis use. Shorter and more intense courses (daily for one week) although initially clinically effective have been followed by clinical worsening in the limited number of cases studied. The relapse was correlated with continued production of the IgM anti-PNM Ab (unpublished data).

Unlike MG, prolonged immunosuppression is not used in combination with plasma therapy for GBS. Existing data, although limited, suggest that concomitant chronic corticosteriod therapy leads to increased morbidity, prolonged recovery, and possibly recurrent disease. Between 2 and 5 percent of GBS patients become chronic or experience recurrent bouts of peripheral demyelination. In many of these patients plasmapheresis produces a rapid (although temporary) improvement that can be documented electrophysiologically by improved motor conduction velocities and increased muscle action potentials.[10]

Beneficial responses in such patients can be maintained by repeated courses of plasmapheresis and/or the addition of immunosuppressive therapy. The clinical effectiveness of corticosteriod therapy in chronic inflammatory polyneuritis was demonstrated in a randomized and blinded trial.[11] Other immunosuppressive drugs used to treat these chronic demyelinating polyneuropathies include azathioprin and cyclophosphamide.

Other Conditions

The development of a serum monoclonal gammopathy in some patients with multiple myeloma, osteosclerotic myeloma, Waldenstrom macroglobulinemia, chronic lymphocytic leukemia, and nonmalignant plamsa cell dyscrasia also can be associated with peripheral neuropathy. Plasmatherapy is used in the malignant plasma dyscrasias to treat hyperviscosity syndromes while the reduction of serum monoclonal antibody production is accomplished chemotherapeutically.[12] In half the patients with nonmalignant plasma cell dyscrasias, the IgM paraprotein has been implicated in the development of a demyelinating neuropathy since it binds a carbohydrate epitope shared by glycoproteins, including the myelin associated glycoprotein, and an acidic glycosphingolipid. Intraneural injection of patient serum into cat sciatic nerve produces focal demye-

lination and conduction block. Although logically plasmapheresis[13] and immunosuppression should be appropriate therapy in these disorders, published results are varied and in some cases disappointing. These results may reflect heterogeneity of the clinical population, inadequate immunological characterization of patients plasmapheresed, and/or inadequate clearance of the monoclonal immunoglobulin from serum because of the high serum concentrations and rates of production.

Another neurologic disease in which multiple immune mechanisms have been implicated is multiple sclerosis. Although a controlled study of plasma therapy of acute exacerbating multiple sclerosis has not been performed, one study on the progressive form of the disease reported benefit using plasmapheresis (weekly for five months) in association with prednisone, low-dose cyclophosphamide, and immunoglobulin.[14] However, further confirmation will be required before clinical efficacy can be established in multiple sclerosis.

In the hands of an experienced team, plasmapheresis can be a valuable and safe therapeutic measure for the short-term reduction of humoral constituents that participate in the autoimmune responses to neural tissue.

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Commentary

Therapeutic Apheresis

R. BEN DAWSON MD

Plasmapheresis is efficacious for hematologic, rheumatic, and nephrologic as well as neurologic diseases. In addition, morbidity and mortality can be spared with plateletpheresis, leukapheresis, and red cell exchange in a very few, partially understood circumstances.

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Plasmapheresis, the most common of the apheresis procedures is lucidly discussed for the neurological diseases in the preceding article by Dr. Koski. Six neurologic conditions—myasthenia gravis (MG), Eaton Lambert syndrome (ELS), Gulliane-Barré syndrome (GBS), chronic inflammatory demyelinating polyneuropathy

(CIDP), and multiple sclerosis (MS)–in which patients have been shown to benefit or possibly to benefit from plasmaphersis[1] are teaching us some disease mechanisms. In MG and ELS, pathogenic antibodies can be removed, the patients improve, and no controlled study is needed. In GBS, Dr. Koski reported[2] the likely pathogenic antibodies two years ago; however the controlled study showing efficacy of plasmapheresis already had been done.[3] MS, the most common of the conditions, lacks a known pathogenic antibody, and the controlled study showing efficacy with plasmapheresis was not, unfortunately, a multiinstitutional study.[4]

Nephrologic indications for plasmapheresis seem now to be limited to Goodpasture's syndrome and rapidly progressive glomerulonephritis (RPGN) with demonstrable antibasement membrane antibody.[5] Prevention of rejection of renal allografts had been a positive indication, but it has failed. An exception would be development of another treatable condition in the allograft, such as immune complex vasculitis or thrombotic thrombocytopenic purpura (TTP) (see below).

Rheumatologic indications include systemic vasculitis (life-threatening) and organ failure in systemic lupus not responsive to medications.[5]

Hematologic disorders responsive to apheresis include a few blood cell disorders. Red cell exchange has saved the life of a malaria victim who had 90+ percent parasitemia. In sickle-cell disease, red cell exchange reduces the rate of second strokes from 90 percent to 10 percent. Red cell exchange does not have a role in the acute, self-limited sickle-cell crisis. However, it is thought to be life-saving in pulmonary and hepatic sickling syndromes.[6] Red cell exchange commonly is employed preoperatively for orthopedic and other surgical procedures associated with significant morbidity due to poor regional blood flow and the higher risk of hypoxia known to cause sickling.

Leukemic blast crisis, especially with a pulmonary sequestration syndrome in myelocytic leukemia represents an indication for leukapheresis that may be life saving.

Symptomatic thrombocythemia may present with transient ischemic attacks (TIAs) resembling partial strokes. The very high platelet count, usually over two million/cc[3] will be lowered with chemotherapy, but acutely plateletpheresis can avoid a stroke.

Hyperviscosity syndromes, usually due to multiple myeloma or related diseases, represent a large group of patients seen by a general plasmapheresis center. This group and TTP (discussed below) are the two big hematologic disease categories. Together with MG and GBS, they represent 90 percent of our efforts. In Waldenström's macroglobulinemia, the large IgM protein is mostly (70 percent) intravascular. Thus, a one plasma volume (2 to 3 liters) exchange carried out over two to three hours (with equivolume 5 percent albumin replacement) will remove about half of the patient's abnormal IgM. And after only one or two exchanges hyperviscosity and its symptoms will be relieved.

Most hyperviscosity syndromes, like most conditions treated by plasmapheresis (for example, MG and GBS), involve abnormally high amounts of IgG proteins or subunits. These are only partially (40 percent) intravascular. Thus, repeated plasma exchange (five to six) procedures are fairly routine. Removing over 80 percent of the patient's IgG requires up to six exchange procedures of one plasma volume each. To avoid critical, acute depletion of plasma clotting factors, procedures are done every two to five days. Reequilibration with extravascular spaces is nearly complete 48 hours after a plasmapheresis (exchange), but normal levels of some plasma proteins are not present for as long as four days.

In all the above plasmapheresis (plasma exchange) procedures, the replacement fluid is sterile, disease-free 5 percent human plasma protein (86 to 100 percent albumin).[7] Rarely, gamma globulin may be given to protect from infection.[8] Also rarely, fresh frozen plasma (FFP) is given, one or two units at the end of a procedure to replete adequate plasma coagulation factors.[7,9,10] However, in one disease, thrombotic thrombocytopenic purpura, FFP seems to supply a needed inhibitor of platelet aggregation.

TTP is probably more than one disease, but in most cases, FFP is exchanged for patient plasma in amounts of 10 or more units per day. Once the disease is under control (which may take a few days to a few weeks), plasma therapy is tapered, finally stopped, and recurrence is unusual. TTP is rare, but plasma exchange is the only therapy associated with bringing the mortality from 90 percent to under 50 percent. Most cases require repeated plasmapheresis. In some centers, TTP accounts for the largest number of procedures, although it is usually number four to five in the list of diseases treated.

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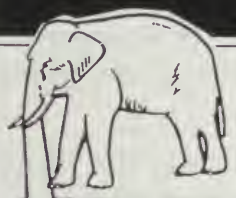
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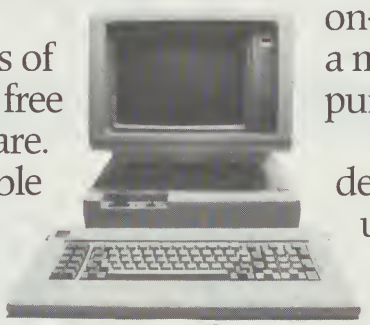
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Dedication Ceremonies

A Ribbon Cutting Ceremony and Dedication of the new building of the Medical and Chirurgical Faculty (1205 Cathedral Street, Baltimore) was held in conjunction with the Semiannual Session of the House of Delegates on Saturday, September 26, 1987.

President of the Maryland Senate, Thomas V. Mike Miller participated in the dedication along with Alan Rifkin, the Governor's Chief Legislative Officer; President of the Medical and Chirurgical Faculty of Maryland, Leon E. Kassel MD; and Chairman of the Faculty Building Committee, George S. Malouf MD.

Welcoming the assembled guests to the festivities, Dr. Kassel introduced dignitaries and speakers. After an Invocation by Leslie Miles MD, Dr. Kassel turned over the microphone to "the man who has devoted countless hours to the completion of the building project, the Chairman of the Building Committee since 1984, George S. Malouf MD."

I stand before you today as the successor to 130 years of Med-Chi building committee chairmen.

In 1858 a Dr. Monmonier, representing what was then called "The Committee on Hall," welcomed the assembled delegates of the Faculty. He noted that for the first time since the association was chartered in 1799 the delegates were gathering in their own hall.

The medical hall was a two-story building with an attic located at 47 North Calvert Street. The facility had nine rooms and a cellar. Dr. Monmonier's committee had been able to purchase the building on behalf of the Faculty for $3,425.

The building we dedicate today is at least four times bigger than the facility on North Calvert Street. It would be nice if our new building had only cost $13,700, four times the price of our 1857 building. Our new building however, cost the Faculty more than 580 times the price of its first permanent dwelling.

More than prices have changed in the last 130 years. In 1857 Faculty membership numbered in the low hundreds. Today the Faculty speaks for more than 6,000 Maryland physicians.

In 1857 there was no Board of Medical Examiners or Commission on Medical Discipline. The Faculty tested, licensed, and disciplined all who wished to practice medicine in Maryland.

In 1857, there was no Department of Health and Mental Hygiene. The Faculty was the only body that had any concern or interest in protecting the health of Maryland's citizens.

In 1857, the Faculty did not have a formal staff. The library was kept open two evenings a week by a physician who was supposed to be paid $400 a year. The Chairman of the Committee on Hall was personally responsible for keeping the building clean and in good repair, and for securing other organizations to rent meeting space to help pay for the upkeep. The Chairman personally opened and closed the building each day.

Perhaps the most striking difference of all can be measured in terms of Faculty dues. In 1857, ten dollars got a physician a lifetime membership in the Faculty.

In browsing through the old documents in the Faculty's archives form 1837 and 1838, I found many things that looked quite familiar, items that helped me decide that in the important respects, things have not changed all that much. After 130 years, we are still the same Faculty.

At the 1858 dedication of Med-Chi's first building, discussions among the physicians present centered on two topics very familiar to us today, malpractice and physician discipline.

Maryland physicians in 1858 were especially disturbed by a precedent-setting high medical malpractice ruling against a local physician. Adding to the problem of the money involved was the fact that the chief plaintiff's witness was a physician, not licensed in Maryland, who served as an "expert witness."

Then too, there was the issue of an Eastern Shore physician whose drug-prescribing practices were far out of line from accepted standards of medical practice in the 1850s.

The agenda of the 1858 meeting reveals another significant similarity with today's Faculty. The primary



George S. Malouf MD, Chairman of the Faculty Building Committee



Principals at Med-Chi's ribbon-cutting ceremony were (from left) Thomas V. Mike Miller, Leon E. Kassel MD, George S. Malouf MD, and Alan Rifkin.

focus of the meeting was quality of care, with lengthy discussions about medical and surgical practices.

Med-Chi was established in 1799 to assure continued quality medical care for Maryland citizens. The agenda of the 1858 gathering and the agenda of our meeting today demonstrate a continuing commitment to preserving and improving the highest quality of health care for Maryland citizens.

I conclude with words taken from the close of Dr. Monmonier's 1858 talk. With the dedication of our new building, we have taken an important step in the right direction toward encouraging friendly interaction, promoting a spirit of harmony and good will among the members, and elevating and advancing our science. There has scarcely been a time when a greater necessity existed for union and harmony in our profession.

Happy for us if this new building be henceforth associated in our minds with recollections of the knowledge, the good sense, and the friendly and cordial deliberations which should subsist among the members of a scientific, liberal, and honorable profession.

Mr. President, members, and honored guests, as Chairman of your building committee, I proudly present you with your new home.



Also present with Drs. Kassel and Malouf were Raymond Scalettar MD, Member of the Board of Trustees of AMA, and Michael R. Dobridge MD, Med-Chi's President Elect.



The State of Maryland

Proclamation from the Office of the Governor

MEDICAL AND CHIRURGICAL FACULTY OF MARYLAND - NEW FACULTY BUILDING DAY

SEPTEMBER 26, 1987

WHEREAS, The year was 1799, and, by an act of our State Legislature, the Medical and Chirurgical Faculty of Maryland came into fruition and was founded for the public good; and

WHEREAS, Since that time, this heralded and highly-respected Faculty has nobly garnered for itself a warmly-cherished reputation as a professional organization whose quest for medical excellence is internationally known and recognized - with the Faculty's members consistently striving to ensure that their patients receive the best quality health care in the world; and

WHEREAS, Today marks yet another special chapter in the vibrant history of the Medical Chirurgical Faculty of Maryland, as the expansion of this organization's headquarters... a $2 million project which includes an expanded medical library, additional office space, and other valuable services to physicians... is officially and ceremoniously dedicated; and

WHEREAS, Maryland is pleased to join with the proud Officers and Members of the Medical and Chirurgical Faculty of Maryland in marking the official dedication of this organization's New Faculty Building in Baltimore, a building which will help to both house and nurture the wonderful legacy and traditions of Med-Chi.

NOW, THEREFORE, I, WILLIAM DONALD SCHAEFER, GOVERNOR OF THE STATE OF MARYLAND, do hereby proclaim September 26, 1987 as MEDICAL AND CHIRURGICAL FACULTY OF MARYLAND - NEW FACULTY BUILDING DAY in Maryland, and do commend this observance to all of our citizens.

Given *Under My Hand and the Great Seal of the State of Maryland,* this 26th day of September, One Thousand Nine Hundred and Eighty-seven

William Donald Schaefer
Governor

Secretary of State



Alan Rikfin, The Governor's Chief Legislative Officer

Governor William Donald Schaefer sent his greetings via Alan Rifkin, who then presented a Proclamation from the Office of the Governor declaring September 26, 1987 as New Faculty Building Day in Maryland. Following a speech by Senate President Miller, Dr. Kassel addressed the guests.

I have here a copy of several pages from the Maryland legislature's hand-written annals from the year 1799 entitled, "An Act to establish and incorporate a Medical and Chirurgical Faculty of Society in the State of Maryland." The preamble reads:

> *WHEREAS, it appears to the General Assembly of Maryland that the establishment and incorporation of a Medical Chirurgical Faculty will be attended with the most benificial and salutary consequences, by promoting and disseminating medical and chirurgical knowledge throughout the State, and may in future prevent the citizens thereof from risking their lives in the hands of ignorant practitioners or pretenders to the healing art.*

With equally honorable and true goals, we come to another milestone in our Faculty's development. We are here today to dedicate the latest improvements in our "home."

On this occasion it is appropriate to look briefly at our very early history in order to appreciate and admire what our organization has accomplished and what it has meant to the people of Maryland.

Our beginning was brought about by 101 charter members whose objectives were to suppress medical quackery in Maryland, to examine and license those who sought to practice medicine in the state, and to establish a system for educating future physicians and for continuing education of existing physicians.

The Act was signed by Governor Benjamin Ogle and became law on January 20, 1799. Our first meeting was held in Annapolis the following June.

In the earliest years Med-Chi's work focused on the examination and licensing of physicians and on suppressing irregular practices. Although Med-Chi had the legal authority to forbid untrained or incompetent individuals to practice medicine, efforts to get local sheriffs



The Honorable Thomas V. Mike Miller, President of the Senate

to enforce the Faculty's rulings did not always meet with success. In 1807 the state was divided into seven districts with a component medical society in each area to better monitor and regulate medical practices.

Also in 1807, with Med-Chi encouragement, the legislature established a College of Medicine, now the University of Maryland Medical School. That law, which theoretically cannot be revoked, makes each Med-Chi President the Chancellor of the Medical School. Med-Chi's membership is designated the board of visitors, with control over Faculty appointments.

After three meetings in Annapolis, the Faculty moved its then biannual meetings to Baltimore. In 1830, the Faculty determined the time had come to turn attention to the charter's charge "to promote and disseminate medical knowledge." That year a medical library was established to purchase professional books and periodicals for use of the membership. The earliest library rules allowed member physicians from rural areas to borrow as many as four books and to keep them from one annual meeting until the next.

1839 was a monumental year. We began publishing our medical journal and determined it was desirable to establish a component society in each county. Most important, a resolution was passed that the Faculty should work in cooperation with other state medical societies toward the formation of a national society. This initiative led to the formation of the American Medical Association, whose first meeting was held in Baltimore in 1848.

In 1858 it was decided that the Faculty required its own hall to facilitate meetings and to house its library and museum. The first home, located at 47 North Calvert Street, served as headquarters through the troubled Civil War period.

In 1869, a move to 60 Courtland Street began a new cycle of intensive activity. After much Med-Chi instigation the legislature established the State Board of Health in 1874. A building fund committee was appointed in 1881, and after many fund drives and years of hard work, it succeeded in constructing our home at 1211 Cathedral Street.

Black physicians were first elected to membership in 1882, and in 1884 the Faculty's constitution was amended to allow the admission of female physicians. In 1894, the Faculty successfully lobbied the legislature for a law requiring all practicing physicians to be registered.

In 1899, when the Faculty celebrated its 100th anniversary, there was a component society active in each county, and close to 100 percent of Maryland's practicing physicians were members.

In the years since 1909 (when the Faculty's 1211 Cathedral Street building was dedicated) many events and advances have shaped the medical profession. Med-Chi has had to hold fast to the charges in its original charter to keep up with the demands placed on it. We cannot forget to pay tribute to two people whose services to Med-Chi over the last 80 years have assured this society's continued role in protecting the health of Maryland's citizens and in guaranteeing those citizens the highest quality medical care.

Marcia Noyes came to the Faculty in 1896 and lived on the top floor of 1211 Cathedral street until her death in 1946. She was Med-Chi's first professional Librarian. In the 1930s, she was made Executive Secretary. Her funeral was held in Osler Hall with Faculty's officers as pall bearers, a tribute to her 50 years of dedicated service.

Jack Sargeant was hired in 1957 as Executive Secretary and later was named Executive Director. His 30-year tenure saw Maryland physicians unite to make our medical society (one of the oldest) one of the most outstanding. In 1961, 1211 Cathedral Street was modernized inside while preserving the exterior appearance. His planning and effort led to the renovation and refurbishing of "School 49," 1205 Cathedral Street, the completion of which we celebrate today.

Our confrontations today may be different from those of the 101 physicians who joined together to form the Faculty and from those of the countless physicians of the past 189 years who have brought us to this moment. The traits those physicians possessed remain essential for us.

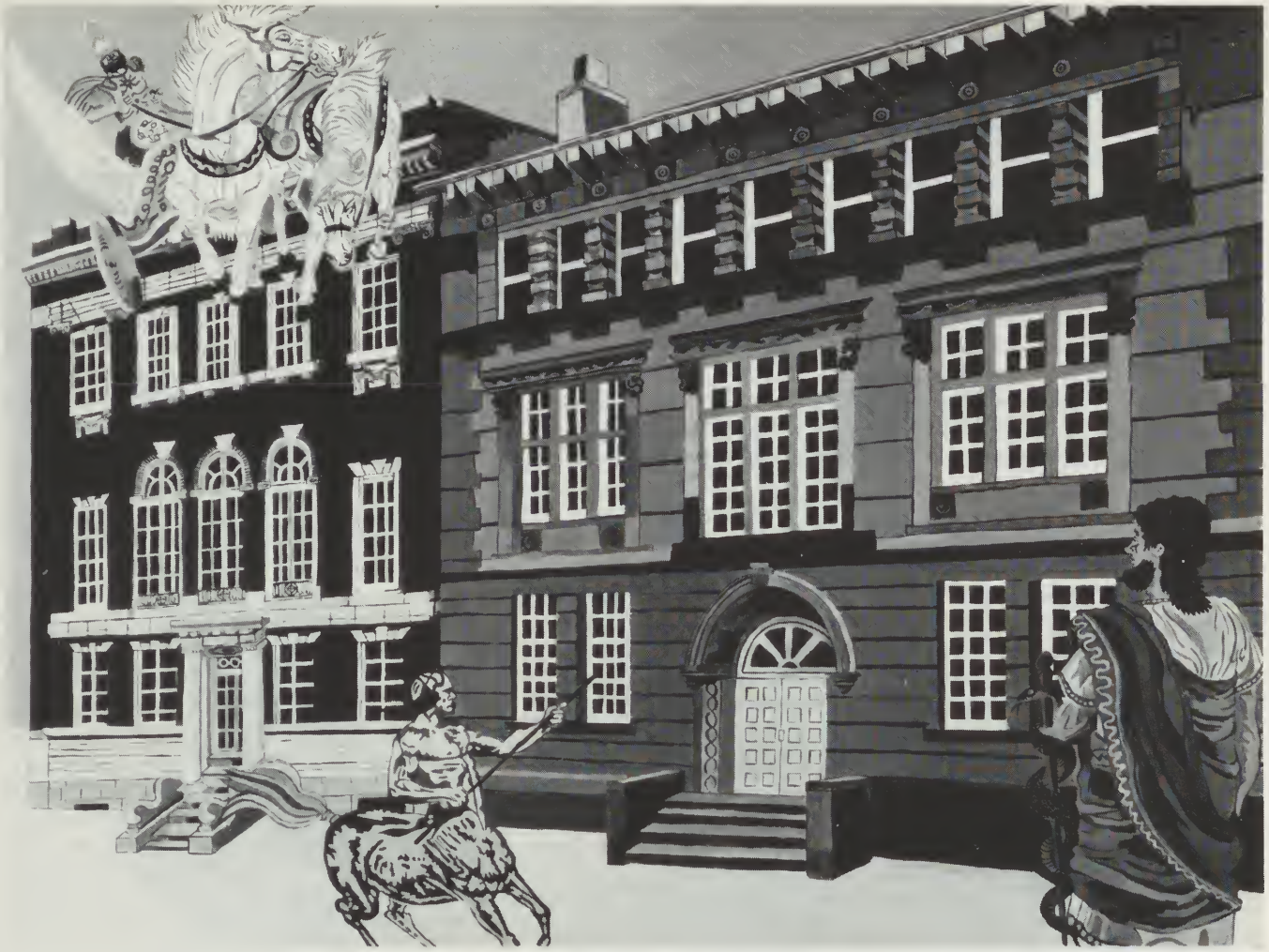
We continue to believe the quality of medical care must never be impaired or compromised. Today that means model self-regulating procedures, continuing medical education programs, and an all-out effort to communicate with the public.

We understand that involvement in this professional association is the one way to state our views and to fight for patients' rights and the rights of practitioners. Dedication to duty by elected officers, delegates, councillors, and member physicians will assure that we keep our profession at the forefront.

History has often repeated itself at Med-Chi. Membership growth frequently has outsized our quarters. This is good. It proves we must continue to combine our talents and efforts. In this, our expanded home, we can continue to shape our profession and its future. With hope and confidence we look forward to our future.



Leon E. Kassel MD, President of Med-Chi



Medical and Chirurgical Faculty of the State of Maryland

Founded in 1799

Apollo, god of healing, endowed Chiron the centaur with all medical knowledge. Aesculapius, Apollo's son, was tutored by Chiron over many years. Thus, humanity came to share in the divine healing powers. All three figures appear on Med-Chi's seal. Posters in full color are available for members for $5 plus postage.

Illustration by Bruno Mattiello for Dedication of the New Faculty Building September 26, 1987

Maryland General Hospital
C. W. Stewart Memorial Lecture

Tuesday, January 19, 1988 3 p.m.

Robert C. Gallo MD
Chief, Laboratory of Tumor Cell Biology
National Cancer Institute

Viruses in Cancer and Aids: Problems Now and in the Future

For further information call 301-225-8790

Medical and Chirurgical Faculty
of the State of Maryland

Semiannual Session House of Delegates
322nd Meeting

Saturday, September 26, 1987
Minutes: House of Delegates
Faculty Building, 1211 Cathedral Street, Baltimore, MD 21201

The 322nd meeting of the House of Delegates of the Medical and Chirurgical Faculty of the State of Maryland was called to order at 2:05 p.m. on Saturday, September 26, 1987 at the Faculty Building, Baltimore, Maryland, the President, Leon E. Kassel MD, and Secretary, Raymond M. Atkins MD, being present.

The following delegates (or alternates) were registered as being in attendance; an asterisk indicates an alternate delegate; (C) denotes Council member:

Allegany County
* Robustiano J. Barrera
Augusto Figueroa

Anne Arundel County
Michael J. La Penta
* David S. O'Brien (C)
Hilary T. O'Herlihy (C)
Jorge B. Ramirez

Baltimore City
* Ian R. Anderson
Donald M. Barrick
James E. Bell
Joseph I. Berman
* Annie M. Bestebreurtje
* Mack Bonner, Jr. (C)
* John W. Bowie
* Stephen P. Cohen
Marion Friedman
Robert B. Goldstein
John H. Hirschfeld
James M. Hitzrot, II
* Gerald A. Hofkin
Joseph H. Hooper
* Murray A. Kalish
Jeanne S. Kraus
John B. MacGibbon
Donald W. Mintzer
Albert Nahum
Samuel O'Mansky
William F. Renner
Benjamin Rothfeld
* Gerhard Schmeisser, Jr.
* Bernard R. Shochet
Gardner W. Smith
Edward L. Suarez-Murias
* Alan J. Sweatman
George Taler
Thomas E. Van Metre, Jr.
Jose M. Yosuico (C)
Joseph W. Zebley, III
* Jack M. Zimmerman

Baltimore County
Marianne Benkert
Harold B. Bob
Esther Edery
Clarence W. Gehris
Christopher M. Harvey
Deusdedit Jolbitado
Bernard S. Kleiman
Paul G. Koukoulas
* Edward Nachlas
Allan G. Scott
Margaret L. Sherrard

Calvert County
Joseph Fastow (C)

Cecil County
Andrew P. Fridberg (C)

Charles County
Guillermo E. Sanchez

Dorchester County
Lewis M. Burdett
Paul A. Stagg

Harford County
Rose M. Bonsack
Ben E. Oteyza

Howard County
Frederick Bergmann

Kent County
Harry P. Ross

Montgomery County
Carol L. Bender
* Dewitt E. DeLawter
Herman C. Maganzini
Francis C. Mayle, Jr.
Margaret T. Snow

Prince George's County
John E. Jeffrey
Zorayda M. Lee-Llacer
George S. Malouf, Jr.
Elliece S. Smith
Frederick Wilhelm

Talbot County
Gregg Rhodes

Washington County
Federico Arthes (C)

Board of Medical Examiners
Arthur T. Keefe, Jr.

Resident Component
Marcel Salive (C)

Council
Raymond M. Atkins
Paul Bormel
Ira N. Brecher
Aurelio De La Paz
Donald H. Dembo
Michael R. Dobridge
Vincent D. Fitzpatrick
Arthur L. Gudwin
John H. Hebb
Charles F. Hoesch
Lawrence A. Jones
Leon E. Kassel
Robert G. Kindred
Reynaldo L. Kee-Llacer
George S. Malouf
Leslie R. Miles
John H. Mulholland
J. David Nagel
Hiroshi Nakazawa
Charles F. O'Donnell
Gary L. Rosenberg
Marvin Schneider
Joseph Snyder
Baltasar B. Velez
Israel H. Weiner
Donald W. Wiczer

Past Presidents
J.D. Drinkard
Howard F. Kinnamon

Also present were members of the Faculty staff.

Invocation

Leslie R. Miles MD, Chairman of the Committee on Medicine and Religion, gave the invocation.

Minutes Approved

The minutes of the meeting of the House of Delegates held on April 29 and May 1, 1987, having been distributed to all members and corrected and approved by the Executive Committee, were presented to the House of Delegates. The House approved the minutes as corrected by the Executive Committee under Special Rule 1.

Council Chairman Report

On motion of Reynaldo Lee-Llacer MD, Council Chairman, the following members, having received the recommendations of their component societies and the Council, were elected to Emeritus Membership in the Faculty:

Baltimore City
Robert A. Abraham MD, Baltimore
Thomas B. Cockey MD, Lutherville
Nicholas Mallis MD, Baltimore
Dezso K. Merenyi MD, Baltimore
William H. Mosberg MD, Baltimore
Evangelina Ramos MD, Owings Mills
Rafael Rodriquez MD, Baltimore
Leonard Scherlis MD, Baltimore
George S. Tan MD, Annapolis
Umberto VillaSanta MD, Baltimore
W. Earl Weeks MD, Baltimore
Stanley N. Yaffe MD, Baltimore

Baltimore County
John M. Arthur MD, Baltimore
Fritz Kobler MD, Catonsville
Peter E. Lapsa MD, Phoenix
Mary E. Matthews MD, Baltimore
Edwin L. Pierpont MD, Baltimore
Milton Schlenoff MD, Baltimore
Rennert M. Smelser MD, Lutherville
James E. Toher MD, Baltimore
Warren W. Wurzbacher MD, Baltimore

Montgomery County
Parker S. Dorman MD, Chevy Chase
James W. Egan MD, Oceanview, DE
Donald Q. Ekman MD, Chevy Chase
Francis A. Ostmann, Jr., MD, Rockville
Allen J. O'Neill MD, Bethesda

Wicomico County
Chester C. Collins MD, Salisbury
William C. Morgan MD, Salisbury

Affiliate
Chi-Chao Chiu MD, Rotonda West, FL

Council Resolution Adopted

Dr. Lee-Llacer, on behalf of the Council, moved adoption of the following resolution which, after receiving the required ⅔ vote to consider, was adopted unanimously:

Whereas, The United States Government promised to provide a broad range of health care services to all elderly Americans through the creation of the Medicare Program in 1966;
Whereas, The federal government is now reducing payments and curtailing benefits within the Medicare Program with plans to further reduce the program's budget by 1.5 billion dollars in Fiscal Year 1988;
Whereas, The need for expanded benefits in both catastrophic and long-term care in the Medicare Program is widely accepted;
Whereas, There exists an increasing need for additional funds to cover the health care requirements of new Medicare enrollees, currently estimated at a rate of 5,000 new beneficiaries per day;
Whereas, Current and proposed financing of such expansion is both inadequate and ill-conceived;
Whereas, Like all Americans, the elderly population in this country have a compelling moral claim to dignified, high quality health care and were promised in 1945 that they had "the right to adequate medical care . . . the opportunity to achieve and enjoy good health . . . and the right to adequate protection from the economic fears of sickness"; and
Whereas, The financial burdens placed on the elderly due to reimbursed medications and long term care can be catastrophic; therefore, be it
Resolved, That all members of the Medical and Chirurgical Faculty of Maryland will demonstrate a continuing interest in providing quality care for the elderly by actively studying the issues, opposing policies detrimental to quality, accessibility and availability of appropriate care for all Americans and constantly evaluating the health care needs of the elderly citizens of Maryland;
Resolved, That the standards of treatment for elderly citizens as well as all Marylanders shall not be compromised due to political concerns not in the best interests of the individual patient's well-being or their continued high quality of life; and
Resolved, That all members of the Medical and Chirurgical Faculty will continue to exhibit sensitivity and responsiveness to the financial status of the elderly population and will consider the patient's financial situation when making a determination whether or not to accept Medicare assignment.

There being the required two-thirds vote to consider the resolution, the resolution was adopted.

Report on House Motion Re Med-Mutual Proxies

Dr. Lee-Llacer, on behalf of the Council, informed the House members of a recent meeting between Gerard Evans, Med-Chi's Director of Government Relations, and Barry Costilo, counsel for the Federal Trade Commission, at which time Mr. Costilo reviewed the motion passed by the House pertaining to the solicitation of proxies for the 1988 election of Medical Mutual Board members and the proxy form, and informed Mr. Evans

that he could see no problem in carrying out the motion as presented. A formal letter is forthcoming from the Federal Trade Commission that will be distributed to the component societies for dissemination to their members.

Treasurer's Report

Jose M. Yosuico MD, Faculty Treasurer, read the certificate of O'Dea and Labrador, CPAs as to the accuracy of the Faculty's books and records for the 1986 calendar year, and an opportunity was given for questions. The House, by unanimous consent, approved the auditor's certification.

Slide Presentations

Dr. Kassel, in the absence of Dr. Thomas Collier, Chairman of the Membership Committee, presented a slide show on "Membership Benefits," which was followed later in the meeting by slide presentations on the "AMA Delegation" presented by Dr. Michael Dobridge, AMA Delegate, and on "Physician Rehabilitation" presented by Dr. Edward Kitlowski, Chairman of the Physician Rehabilitation Committee. Dr. Malouf expressed appreciation to the President and the staff for their efforts in producing the slide shows, as did the members of the House with their applause.

AMA Guest

The President introduced Raymond Scalettar MD, member of the AMA Board of Trustees, who made brief remarks to the House. He also stated that the Faculty's slide show was an accurate picture of the AMA Delegates' efforts on behalf of all physicians.

1986–1987 Committee Reports

The following 1986–1987 Committee reports having been distributed in writing to all members for information, an opportunity was afforded to raise questions or make comments.

Report of the Delegates to the American Medical Association—Albert M. Antlitz MD, Roland T. Smoot MD, Donald T. Lewers MD, George S. Malouf MD, Charles F. O'Donnell MD, Michael R. Dobridge MD (Interim Meeting, December 7–10, 1986)
Ad Hoc Policy Advisory Committee on AIDS—J.D. Drinkard MD, Chairman
Committee on Alcoholism and Chemical Dependency—Bruce T. Taylor MD, Chairman
Report of American Medical Association Education and Research Foundation (AMA-ERF)—Elizabeth A. Linhardt, State Chairman
Report of the Auxiliary—Nancy Howell, President
Committee on Continuing Medical Education Review—Ian Anderson MD, Chairman
Committee on Drugs—Stephen A. Hirsch MD, Chairman
Committee on Emergency Medical Services—Peter M. Fahrney MD, Chairman
Committee on Emotional Health—Gary W. Nyman MD, Chairman
Executive Director—Angelo J. Troisi FACHE
Finance Committee—Jose J. Yosuico MD, Chairman, Treasurer
Committee on Hospital Medical Staffs—Donald H. Dembo MD, Chairman
Legislative Committee—Israel H. Weiner MD, Chairman
Liaison Committee with Department of Health and Mental Hygiene—Uthman Ray, Jr., MD, Chairman
Liaison Committee with Third Party Carriers—Paul Bormel MD, Chairman
Library and History Committee
Long Term Care and Geriatrics Committee—Edmund G. Beacham MD, Chairman
Maryland Medical Journal—James G. Zimmerly MD, Editor, Victor R. Hrehorovich MD, Associate Editor
Med-Chi Insurance Fund—W. Kenneth Mansfield MD, Chairman
Medicine and Religion Committee—Leslie R. Miles, Jr., MD, Chairman
Medicolegal Committee—Arthur Kaufman MD, Chairman
Task Force on Membership—Thomas A. Collier MD, Chairman
Occupational Health Committee—Michael K. Spodak MD, Chairman
Peer Review Committee—Emidio A. Bianco MD, Chairman
Committee on Physician Assistants—Bernard Tabatznik MD, Chairman
Physician/Patient Relations Committee—Lois E. Wehren MD, Chairman
Committee on Physician Rehabilitation—Michael G. Hayes MD, Chairman
Committee on Preventive Medicine and Public Health—Annelies S. Zachary MD, Chairman
Committee on Professional Ethics—Louis C. Breschi MD, Chairman
PRO Monitoring Committee—Joseph I. Berman MD, Chairman
Public Relations Committee—James E. Bell MD, Chairman
Committee on Scientific Activity—J. Courtland Robinson MD, Chairman
Secretary—Raymond M. Atkins MD
Treasurer—Jose M. Yosuico MD

Memorial Resolutions

On motion of the Secretary, Raymond M. Atkins MD, the following resolutions were adopted unanimously by the House, each on a separate vote:

Karl F. Mech, Sr., MD, 1910–1987

Whereas, Karl F. Mech, Sr., MD died on May 10, 1987 after serving his patients, his profession, and his community throughout his long and successful career;

Whereas, Dr. Mech was a true Baltimorean, having been born in the city, educated at City College and the University of Maryland, and completing his medical training at St. Agnes Hospital where he served on the surgical staff until his death;

Whereas, He was not only an excellent clinician and teacher, but a researcher as well, having been involved

in the first clinical research on penicillin while serving in the United States Army during World War II;

Whereas, He served his profession in many capacities during his long career but is most remembered for shaping and guiding many innovative, legislative reforms of the Medical Practice Act, and for the development of the legislation establishing the Commission on Medical Discipline which became a model for the nation;

Whereas, Dr. Mech served on many committees in both the Baltimore City Medical Society and the Medical and Chirurgical Faculty during his 47 years of active membership and held the offices of Treasurer, Vice President, and President of the Medical and Chirurgical Faculty of Maryland, Secretary to the Board of Medical Examiners, and at the time of his death, Executive Secretary of the Commission on Medical Discipline;

Whereas, He served his church as a Sunday School teacher, and Chairman of its Board of Trustees, and was called by his pastor a "man of God"; and

Whereas, His service to the community was acknowledged by a Governor's Citation in 1986 and a Citizen's Citation from the Mayor of Baltimore in 1987; therefore, be it

Resolved, That the House of Delegates of the Medical and Chirurgical Faculty of the State of Maryland expresses its sorrow at the loss of their beloved colleague Karl F. Mech, Sr., MD, and extends its deepest sympathy to his children Dr. Karl F. Mech, Jr., Ms. Constance C. Mech, and Ms. Laura M. Getschel, and to his fiance, Ms. Flora Luttrell; and

Resolved, That a copy of this Resolution be spread upon the minutes of the meeting of the Medical and Chirurgical Faculty House of Delegates and a copy be sent to the family of Karl F. Mech, Sr., MD.

G. Herbert Sembly MD, 1898–1987

Whereas G. Herbert Sembly MD, born in Lutherville, Maryland, in 1898, the first of ten children, graduated from Howard University Medical School in 1922 with the degree of Doctor of Medicine, and interned at the Veteran's Administration Hospital in Tuskegee, Alabama;

Whereas, He began the practice of medicine in Salisbury, Maryland in 1927, which he continued until his death on May 29, 1987;

Whereas, Dr. Sembly served with pride as a member of the Department of Medicine at Peninsula General Hospital Medical Center;

Whereas, He was a devoted member of his church and numerous civic, fraternal, and professional organizations throughout his long and productive life;

Whereas, He was held in high esteem as a symbol of leadership and accomplishment by all with whom he came in contact, always standing as an example of gentlemanly and professional deportment during historical times of transition in relationships among men;

Whereas, He served with dedication, enthusiasm, and pride as a member of the Wicomico County Medical Society, which honored him with a special tribute to his years as a physician who upheld the highest traditions of the healing arts; and

Whereas, His death will leave a void in the lives of his family, friends, patients, and colleagues; therefore, be it

Resolved, That the House of Delegates of the Medical and Chirurgical Faculty of the State of Maryland expresses its profound sorrow and deep sense of loss at the death of G. Herbert Sembly MD, a member from Wicomico County; and

Resolved, That a copy of this resolution be sent to his wife, Mrs. Mae Jones Sembly in recognition of the high esteem in which Dr. Sembly was held.

Maryland Foundation for Health Care Elections

The Secretary read the nominations submitted for election to the Board of Directors of the Maryland Foundation for Health Care.

There being no nominations from the floor or contest for any position, the following were elected by voice vote:

Baltimore City
Raymond M. Atkins MD, GS (1990)
James E. Bell MD, R (1990)
Hiroshi Nakazawa MD, GS (1990)
Baltimore County
William J. Dunseath MD, D (1990)
Bernard S. Kleiman MD, OTO (1990)
Montgomery County
Donald R. Lewis MD, FP (1990)
Stanley M. Kirson MD, GS (1990)
Prince George's County
Suresh C. Gupta MD, IM (1990)
Frederick H. Wilhelm MD, FP (1990)
Eastern District
Aubrey C. Smoot MD, OTO, Wicomico County (1990)

The President advised the members that the vacancies in the Southern and Western Districts would be filled by the Board of Directors of the Foundation in accordance with its bylaws.

Bylaws Committee Report

Harold Bob MD, on behalf of the Bylaws Committee, moved adoption of the following bylaw amendment which was adopted by unanimous vote:

Committee on AIDS

Amend Article XI by inserting the following Section 1, all subsequent sections of said article being redesignated:

Section 1. A *COMMITTEE ON AIDS* shall be appointed annually. The Chairman and members shall be appointed by the President. The Committee shall work toward educating the public and the membership with respect to all aspects of AIDS. It shall review current medical treatment and policies of industry, housing, hospitals, and schools with respect to AIDS patients, present scientific information relative to AIDS, and shall offer its services to component medical societies, hospital medical staffs, local and state health departments, and school systems. The committee may cooperate with government and private agencies working in the field of AIDS and invite the attendance of physicians and nonphysician

members of such agencies to work with the committee on a nonvoting basis.

Bylaws Committee

Dr. Bob, on behalf of the Bylaws Committee, moved adoption of the following bylaw amendment which received the required ⅔ vote for adoption as follows:

Amend Article XI, Section 2 (Bylaws Committee), by striking out the first sentence "The President shall appoint, within one month after assuming his duties, A *BYLAWS COMMITTEE* of four members to consider and recommend to the House of Delegates such amendments to those bylaws as it deems desirable" and inserting "A *BYLAWS COMMITTEE* of seven members shall be appointed by the President as follows: each component society shall elect one nominee for the committee and the President shall select from those nominees submitted, one member from each of the following groups: (a) Allegany, Carroll, Frederick, Garrett, and Washington Counties; (b) Caroline, Cecil, Dorchester, Harford, Kent, Queen Anne's Somerset, Talbot, Wicomico, and Worcester Counties; (c) Baltimore City; (d) Baltimore County; (e) Anne Arundel, Calvert, Charles, Howard, and St. Mary's Counties; (f) Montgomery County; and (g) Prince George's County. The committee shall. . . ."

PRO Monitoring Committee

Dr. Bob, on behalf of the Bylaws Committee, moved adoption of the following bylaw amendment, which was adopted by unanimous vote:

Amend Article XI, Section 34 (PRO Monitoring Committee), by striking out "Maryland Foundation for Health Care" and inserting "appropriately designated organization which has the contract."

Young Physicians' Committee

Dr. Bob, on behalf of the Bylaws Committee, moved adoption of an amendment to the bylaw amendment. After debate, the amendment was adopted and the bylaw amendment was adopted, as amended, by the required ⅔ vote.

Section 35. *A COMMITTEE ON YOUNG PHYSICIANS* of at least five members shall be appointed annually by the President, who shall appoint the Chairman of the Committee. It shall be composed of physician members age 40 and under or in practice less than five years following completion of formal residency and fellowship training. The purpose of the committee shall be to increase the involvement and leadership of young physicians in organized medicine and to provide a direct means for young physicians to participate in such activities. All members of the Faculty who are under 40 years of age or who are within the first five years of professional practice shall be eligible for membership on this committee. The committee shall nominate one delegate and one alternate delegate to the AMA Young Physicians Section. Delegates and alternate delegates shall be AMA members and shall attend business sessions of the AMA Young Physicians' Section.

Resolution 1S/77 Reaffirmed

The Secretary reported Resolution 1S/77 with a staff review required after the expiration of ten years. Resolution 1S/77 was reaffirmed and will remain in effect without further action, as follows:

Whereas, The cost of health care is increasing at an alarming rate, faster than other costs in this inflationary economy; and

Whereas, Medicine is a field where new techniques and methods increase the number of workers, in contrast to most industries where new methods reduce the number of workers; and

Whereas, Most patients are covered by either private insurance or government funds, and, therefore, do not directly pay or even known their hospital costs; and

Whereas, The greatest increase in health care costs is in the hospital component; and

Whereas, Physicians are responsible for admission of patients to hospitals and the ordering of ancillary tests performed in the provision of care to such patients; therefore, be it

Resolved, That Medical School Faculty Members and the Practicing Physicians of Maryland are urged to become more cost conscious and to reemphasize the use of the utmost discretion in admitting patients to hospitals and in ordering ancillary services in patient care.

Announcement

The President announced that the late H. Melvin Radman MD had bequeathed to the Faculty library his medical library estimated at being worth in excess of $50,000 and expressed appreciation on behalf of the Faculty.

Adjournment

There being no further business to come before the House the meeting was adjourned *sine die* at 3:24 p.m.

RAYMOND M. ATKINS **MD**
Secretary

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Bylaws Committee

Mr. President and Members of the House of Delegates:

The Bylaws Committee recommends the following bylaw amendments to the House of Delegates for its consideration:

1. Proposed Bylaw Amendment to Establish the Ad Hoc Policy Advisory Committee on AIDS as a Standing Committee of the Faculty. Rationale: To more appropriately identify the standing of this committee and its purpose.

Amend Article XI by inserting the following Section 1, all subsequent sections of said article being redesignated:

Section 1. A *COMMITTEE ON AIDS* shall be appointed annually. The Chairman and members shall be appointed by the President. The committee shall work toward educating the public and the membership with respect to all aspects of AIDS. It shall review current medical treatment and policies of industry, housing, hospitals, and schools with respect to AIDS patients, present scientific information relative to AIDS, and shall offer its services to component medical societies, hospital medical staffs, local and state health departments and school systems. The committee may cooperate with government and private agencies working in the field of AIDS and invite the attendance of physicians and non-physician members of such agencies to work with the committee on a non-voting basis.

The Bylaws Committee recommends adoption of the above amendment.

2. Proposed Bylaw Amendment to Change the Composition of the Bylaws Committee. Rationale: To increase the membership of the committee from four to seven members and to provide the same geographical representation as the Nominating Committee.

Amend Article XI, Section 2 (Bylaws Committee), by striking out the first sentence "... The President shall appoint, within one month after assuming his duties, A BYLAWS COMMITTEE of four members to consider and recommend to the House of Delegates such amendments to those bylaws as it deems desirable ..." and inserting "... A BYLAWS COMMITTEE of seven members shall be appointed by the President as follows: each component society shall elect one nominee for the committee and the President shall select from those nominees submitted, one member from each of the following groups: (a) Allegany, Carroll, Frederick, Garrett, and Washington Counties; (b) Caroline, Cecil, Dorchester, Harford, Kent, Queen Anne's, Somerset, Talbot, Wicomico and Worcester Counties; (c) Baltimore City; (d) Baltimore County; (e) Anne Arundel, Calvert, Charles, Howard, and St. Mary's Counties; (f) Montgomery County; and (g) Prince George's County. The Committee shall ..."

OLD

(brackets indicate deletion)

Section 2. [The President shall appoint, within one month after assuming his duties, A BYLAWS COMMITTEE of four members to] consider and recommend to the House of Delegates such amendments to those bylaws as it deems desirable. It may draft its own amendments or alter as it sees fit such proposed amendments as are submitted to it by members, committees or component societies except that the House of Delegates may direct the committee to draft and report any amendment to the next session. It shall also have the duty to review and determine, with the advice of the Parliamentarian, that bylaws written or amended by component societies are not in conflict with the requirements of the Faculty as provided in Article I, Section 1, of these Bylaws. The President shall designate the Chairman.

NEW

(CAPS indicate change)

Section 2. A BYLAWS COMMITTEE OF SEVEN MEMBERS SHALL BE APPOINTED BY THE PRESIDENT AS FOLLOWS: EACH COMPONENT SOCIETY SHALL ELECT ONE NOMINEE FOR THE COMMITTEE AND THE PRESIDENT SHALL SELECT FROM THOSE NOMINEES SUBCOMMITTED, ONE MEMBER FROM EACH OF THE FOLLOWING GROUPS: (A) ALLEGANY, CARROLL, FREDERICK, GARRETT, AND WASHINGTON COUNTIES; (B) CAROLINE, CECIL, DORCHESTER, HARFORD, KENT, QUEEN ANNE'S, SOMERSET, TALBOT, WICOMICO AND WORCESTER COUNTIES; (C) BALTIMORE CITY; (D) BALTIMORE COUNTY; (E) ANNE ARUNDEL, CALVERT, CHARLES, HOWARD AND ST. MARY'S COUNTIES; (F) MONTGOMERY COUNTY; AND (G) PRINCE GEORGE'S COUNTY. THE COMMITTEE SHALL consider and recommend to the House of Delegates such amendments to those bylaws as it deems desirable. It may draft its own amendments or alter as it sees fit such proposed amendments as are submitted to it by members, committees or component societies except that the House of Delegates may direct the committee to draft and report any amendment to the next session. It shall also have the duty to review and determine, with the advice of the Parliamentarian, that bylaws written or amended by component societies are not in conflict with the requirements of the Faculty as provided in Article I, Section 1, of these Bylaws. The President shall designate the Chairman.

The Bylaws Committee recommends adoption of this bylaw amendment.

3. Bylaw Amendment to Change the Language of the PRO Monitoring Committee. Rationale: To change the wording in the charge to the committee to clarify the responsibilities of the committee, authorizing it to re-

view the effect of programs carried on by all qualified organizations.

Amend Article XI, Section 34 (PRO Monitoring Committee), by striking out ". . . Maryland Foundation for Health Care . . ." and inserting ". . . appropriately designated organization which has the contract. . . ."

OLD

(Brackets indicate deletion)

Section 34. THE PRO MONITORING COMMITTEE shall be appointed by the President. The President shall designate the chairman. All members shall be chosen for their knowledge, experience, and interest in the activities of the Professional Review Organizations. The committee shall act as an analytical group to review the effect of programs carried out by the [Maryland Foundation for Health Care] with respect to the cost and quality of medical care. The committee will also assist in providing informational and educational activities to such groups and individuals as may be appropriate, and advise other health care agencies on the issues of medical care quality.

NEW

(CAPS indicate change)

Section 34. THE PRO MONITORING COMMITTEE shall be appointed by the President. The President shall designate the chairman. All members shall be chosen for their knowledge, experience, and interest in the activities of the Professional Review Organizations. The committee shall act as an analytical group to review the effect of programs carried out by the APPROPRIATELY DESIGNATED ORGANIZATION WHICH HAS THE CONTRACT with respect to the cost and quality of medical care. The committee will also assist in providing informational and educational activities to such groups and individuals as may be appropriate, and advise other health care agencies on the issues of medical care quality.

The Bylaws Committee recommends adoption of the above amendment.

4. Bylaws Amendment to Establish the Task Force on Young Physicians as a Standing Committee of the Faculty. Rationale: To more appropriately identify the standing of this committee and its purpose.

Amend Article XI by inserting after Section 34, the following new Section 35, all subsequent sections of said article being redesignated:

Section 35. A COMMITTEE ON YOUNG PHYSICIANS of at least five members shall be appointed annually by the President, with the members appointed by the Chairman with approval of the President. It shall be composed of physician members age 40 and under or in practice less than five years following completion of formal residency and fellowship training. The purpose of the committee shall be to increase the involvement and leadership of young physicians in organized medicine and to provide a direct means for young physicians to participate in such activities. All members of the Faculty who are under 40 years of age or who are within the first five years of professional practice shall be eligible for membership on this committee. The committee shall nominate one delegate and one alternate delegate to the AMA Young Physicians Section. Delegates and alternate delegates shall be AMA members and shall attend business sessions of the AMA Young Physicians Section.

The Bylaws Committee recommends adoption of the above amendment.

• • •

As a matter of information:
(a) The Bylaws Committee has pending on its agenda (1) the matter of the AMA Delegation seating (presently being studied by the Ad Hoc Committee to Study Role Relationships), (2) a charge to be written outlining the responsibilities of the Editorial Board of the *Maryland Medical Journal*, and (3) the possible dissolution of several inactive committees upon recommendations by the committee chairmen.

(b) The committee discussed the pending matter of the Allegany County Medical Society's request to create a special category of membership for "prematurely" retired physicians; however, it was determined that this matter had been resolved and no action is required. Current bylaws provide associate membership for physicians not engaged in the full-time practice of medicine.

(c) The committee also agreed to make suggested changes throughout the bylaws so as to provide uniformity among the committees and to empower the President to appoint the chairmen and members of all Faculty committees, with the exception of the Nominating Committee which will retain the Immediate Past President as its Chairman. These specific amendments will be presented for individual consideration before the House at its next meeting.

This concludes the Bylaws Committee Report.

HAROLD B. BOB **MD, Chairman, Baltimore**
ALEX AZAR **MD, Salisbury**
J. RICHARD LILLY **MD, Hyattsville**
LESLIE R. MILES, JR. **MD, Lonaconing**

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Delegates to the AMA House of Delegates Annual Meeting, June 21–25, 1987

Mr. President and Members of the House of Delegates:

Your delegation attended the annual session of the AMA House of Delegates in Chicago and reports the following summary of the major issues considered at the meeting:

AIDS

The prevention and control of AIDS easily dominated the discussion at this meeting. The subject received widespread media attention. Central to the discussion was a far-reaching report calling for 17 specific recommendations. A number of resolutions on the issue also were considered.

Recommendations contained in the widely publicized report addressed AMA's overriding concern that there be a judicious balance between the well-being of HIV-positive patients and the protection of the public health. The recommendations were detailed in AMA Board of Trustees Report YY and were based on the best scientific information and data currently available.

The expanded policy position directs AMA to continuously monitor and analyze developments in AIDS and update policy and recommendations as dictated by advances in knowledge.

A major thrust of the report is that education must continue to be the major weapon in halting the spread of HIV infection. It was emphasized that physicians should assume the leadership role in educating themselves, their patients, and the public. The report further stressed that individuals in society must assume responsibility for being well-informed and for actions that affect their own health and the health of others. It also stated the need for concerted and cooperative efforts by all members of society in the fight against AIDS.

The House approved several revisions in the report. It calls for:

1. Mandatory testing for the AIDS virus for donors of blood and blood fractions, organs, and other tissues intended for transplantation in the US or abroad; for donors of semen or ova collected for artificial insemination or *in-vitro* fertilization; for immigrants to the US; and for military personnel.

2. Voluntary testing should be regularly provided for patients who are from areas with a high incidence of AIDS or who engage in high-risk behavior requiring surgical or other invasive procedures. If the voluntary policy is not sufficiently accepted, the hospital and medical staff should be prudent to consider a mandatory program for the institution.

Foreign Medical Graduate Section

The House did **not** approve the establishment of a new Section for Foreign Medical Graduates which was recommended by the Board of Trustees.

Calling it an emotional and difficult issue, the Reference Committee cited a number of reasons why the new Section would result in unmet needs and unfilled expectations among many FMGs:

- Mainstreaming of FMGs in organized medicine is occurring and will continue for those who desire to be mainstreamed.
- Concern exists that a Section may increase rather than diminish conflicts likely to arise from divergent points of view and the special interests represented by such a heterogeneous group.
- Convincing evidence is lacking regarding the likelihood that membership growth would result from the establishment of a Section.
- Most issues of interest to FMGs are concerns shared by all physicians and are, therefore, appropriately addressed in a broader forum such as the House of Delegates.

The House concurred in the committee's belief that FMGs should be encouraged to become actively involved within their local and state societies.

AMA Finances

- There will be no dues increase in 1988 but will likely be required in 1989 to support continued Association growth.
- The House filed the auditor's report showing an increase of 11.4 percent operating revenues in fiscal year 1986 over 1985 for a total of $140,729,000.
- Total 1986 operating expenses amount to $133,323,000, representing an increase of 9.4 percent over the previous year.

Dispensing by Physicians

The issue of physicians dispensing drugs received much attention as the House sought to clarify AMA's position.

After considerable discussion, the House voted to adopt the following policy statement.

> RESOLVED, That the American Medical Association support the physician's right to dispense drugs and devices when it is in the best interest of the patient and consistent with AMA's ethical guidelines.

Health Policy Agenda for the American People

Culminating five years of effort to reexamine the basic values on which the health care system is based, the House considered 195 recommendations of the Health Policy Agenda for the American People.

Development of these recommendations involved over 425 representatives from 172 different health, health-related, business, government, and consumer groups. Their mission was to examine the immediate concerns of today as well as the issues that will be confronting the health sector into the next decade and the next century.

The House adopted the great bulk of HPA recommendations as policy. It modified others based on the Board's advice and the testimony presented at the hearing of the Special Reference Committee. Some HPA recommendations were rejected. (NOTE: A final version containing AMA House actions was available in August following receipt of the official transcript of the deliberations.)

PROs

The difficulties physicians are having with PROs continue to impact upon the House of Delegates through the introduction of a large number of resolutions.

Also the Council on Medical Service submitted a comprehensive report providing information on the AMA's activities with respect to the PRO program, including

- a detailed description of the recently achieved agreement between the AMA, HCFA, OIG, and AARP concerning new procedures for PRO handling of sanction cases that assure greater due process protections for physicians.
- an expression of the AMA's view that PROs should be oriented toward assuring quality through nonpunitive, educational approaches.

In other actions, the House:

- adopted a resolution calling on the AMA to seek an amendment to the Medicare law to eliminate the notice of Medicare denial of payment decision based on adverse quality of care findings until after all review and appellate avenues are exhausted.
- asked the AMA to continue to monitor the activities of PROs and encourage physicians to report their concerns with the PRO program to the AMA and their state medical associations.
- asked the AMA to seek amendments to the PRO law that would require
  1. The definition of "gross and flagrant" be reviewed and modified to include only those violations that cause the PRO to conclude that the continuation of medical practice by the physician would constitute an immediate danger to the health, safety, or well-being of Medicare beneficiaries; and
  2. If an "imminent hazard" to the health and welfare of Medicare beneficiaries exists, a special expedited hearing process should be statutorily created for immediate action prior to, if possible, or immediately after a sanction decision.
- Recommended that in cases involving a PRO denial, a physician of the same specialty will review a case prior to the formal denial letter being sent. Prior to the initiation of a sanction action or corrective action plan *either a subspecialist peer or a specialist who has appropriate expertise and experience in the field* will review the case.
- Also recommended that the AMA seek changes that would provide
  1. Prior to recommending sanctions to the Office of the Inspector General (OIG), the PRO contracting with the Health Care Financing Administration (HCFA) must provide for review by an impartial panel of physicians practicing in a setting similar to that of the reviewed physician;
  2. The standard or level of care on which the physician is judged be established by expert witnesses, recognized textbooks and journal articles, and other credible evidence, not by a panel member or members, but by another individual who would present the case to the panel in the presence of the reviewed physician;
  3. Opportunity be accorded to the reviewed physician to hear and see all evidence presented to the impartial panel and respond to it with witnesses and other credible evidence;
  4. The impartial physician panel render its decision based solely on the evidence produced at the review proceedings; and
  5. The PRO formulate its recommendations to the OIG based solely on the evidence considered by the impartial physician panel and subsequent briefs or materials developed by the PRO on the case or cases subject to review, these to be provided to the reviewed physician for comment.
- Asked the Board to study whether the AMA should seek repeal of the PRO law.

Physician DRGs

The House reiterated AMA's strong opposition to include any physician under the DRG program by recommending that the AMA

- Continue its vigorous opposition to any proposal that would reimburse physicians according to diagnosis related groups (DRGs);
- Continue its opposition to the discriminatory proposal by the US Office of Management and Budget to include compensation of radiologists, anesthesiologists, and pathologists under in-hospital diagnosis related groups (DRGs);
- Continue to encourage members of the Congress of the United States to support concurrent Resolution H. 30 and S. 15, regarding the inclusion of physicians in any DRG program;
- Seek support of patients in opposing the inclusion of physicians in the DRG reimbursement plans.

Omnibus Budget Reconciliation Act of 1986

The House considered several resolutions that addressed problems physicians are experiencing with OBRA and called on the AMA to

- Advise its members that the decision of whether to be a "participating" physician in Medicare is a personal choice;
- Use all appropriate means to rescind those recently enacted regulations and statutes that unfairly discriminate against health care providers and jeopardize the quality, availability, and affordability of health care for the aged and the infirm;
- Request Congress to return to the original intent of the Medicare Law (Title XVIII) as expressed in Sections 1801 and 1802 enacted in 1965;
- Specifically request Congress to rescind the "incentive" in the Omnibus Budget Reconciliation Act of 1986 regarding hospital referral of medicare patients to participating physicians;
- Work to amend the Medicare law to eliminate any financial incentives to Medicare carriers for signing up large numbers of physician providers;
- Specifically seek to rescind, before its effective date of October 1, 1987, the Omnibus Budget Reconciliation Act of 1986 provision that requires a nonparticipating physician who performs an elective surgical procedure on an unassigned basis for a Medicare beneficiary to provide the beneficiary in

writing the estimated approved charge under Medicare, the excess of the physician's actual charge over the approved amount, and the coinsurance applicable to the procedure.

MAAC Regulations

The House considered a report from the Council on Medical Service and several resolutions dealing with problems associated with Medicare reimbursement and the discrepancies in Maximum Allowable Charge calculations.

The House adopted policy calling on the AMA to

- Continue to seek judicial, legislative, and regulatory changes that will eliminate the Medicare maximum allowable actual charge (MAAC) regulations for participating physicians.
- Seek to assure, in the meantime, that all Medicare fiscal intermediaries send to nonparticipating physicians adequate information for calculating MAAC levels.
- Support any individual component society's legal efforts to prevent passage or overturn any state law that restricts the right of physicians to contract for services rendered to their patients under certain conditions.

Scientific Informational Reports

Although no House action was required, the delegates received a record number of informational reports from the Council on Scientific Affairs. Of the 22 reports issued, 11 dealt with various aspects of AIDS. Other topics included:

- treatment of infertility
- colonic irrigation
- corneal transplantation
- evaluation of routine infant circumcision
- aversion therapy
- commercial hair analysis
- acid rain
- positron emission tomography

Single copies of these reports are available from the AMA's Division of Basic Science.

Tobacco

The House of Delegates took several actions to augment AMA's continuing program in opposition to the use of tobacco products.

- Recommend that the Federal Aviation Administration establish regulations to ban smoking on all commercial aircraft.
- Develop model legislation to improve enforcement of laws restricting children's access to tobacco, including a proposal to establish licenses for the sale of tobacco (similar to that for liquor) that could be revoked for conviction for sales to minors.
- Encourage the passage of laws, ordinances, and regulations that would set the minimum age for purchasing tobacco products at 21.
- Study the dangers of clove cigarettes.
- Intensify efforts to educate the public about the hazards of using all tobacco products.
- Urge physicians to provide "quit smoking messages" to all of their patients who smoke as part of routine medical care.
- Encourage physicians to participate in continuing medical education activities designed to help them assist their patients to quit smoking.
- Gather information regarding the progress that is being made on the national, state, and local levels toward achieving a "Tobacco Free Society by the Year 2000" and give progress reports to the house at each Interim Meeting until the year 2000.

Conclusion

AMA House meetings provide a unique educational opportunity and we encourage you to attend and to participate. Any member of the Association may present testimony at the Reference Committee hearings and, of course, corridor discussions on the issues provide ample opportunities to get your views across.

If you cannot attend the meeting you can be represented through your delegate. Let your delegation know your opinions. You can also prepare a resolution and request that it be submitted to the House.

Many AMA policies began with an individual physician who had a good idea and coaxed it through the democratic process.

Delegates:
ALBERT M. ANTLITZ MD, Chairman
ROLAND T. SMOOT MD, Vice-Chairman
DONALD T. LEWERS MD
GEORGE S. MALOUF MD
CHARLES F. O'DONNELL MD
MICHAEL R. DOBRIDGE MD

Alternates
JOSEPH SNYDER MD
HILDA I. HOULIHAN MD
JOHN H. HEBB MD
HENRY N. WAGNER, JR., MD
PHILIP L. SCHNEIDER MD (Resident)
WILLIAM E. VENANZI JR. (Student)

In the Matter of
Kook Been Ahn MD
Before the
Commission on Medical Discipline

Findings of Fact,
Conclusions of Law, and Order

Based on certain information coming to the attention of the Commission on Medical Discipline (the "Commission"), the Commission determined to charge Kook Been Ahn MD (the "Respondent") with violation of Section 14-504(6) of the Medical Practice Act, Health Occupations Article, Annotated Code of Maryland.

Appropriate notice of the charges and the grounds from which they arose were given to Respondent by letter dated March 31, 1987. A hearing on the charges was held on June 16, 1987.

Findings of Fact

Based on the evidence produced at the hearing, the Commission finds that:

1. At all times relevant to this case, Respondent was a physician licensed to practice medicine in the State of Maryland;
2. On November 12, 1986, the Respondent was convicted of rape in the second degree by the Circuit Court of Baltimore City, State of Maryland, in violation of the Annotated Code of Maryland.
3. That this was a conviction of a crime involving moral turpitude.

Conclusions of Law

Based on the foregoing Findings of Fact, the Commission finds that Respondent violated Section 14-504(6) of the Medical Practice Act in that he was convicted of a crime involving moral turpitude.

Order

Based on the foregoing Findings of Fact and Conclusions of Law, it is this 30th day of June 1987, by a majority vote of those members of the Commission hearing this case, hereby.

ORDERED that the license of the Respondent, Kook Been Ahn MD, to practice medicine be REVOKED, and it is further

ORDERED that the revocation by STAYED, upon the performance of the following conditions:

1. That the Respondent be placed on probation for a period of five years from November 12, 1986; and
2. That the Respondent not engage in the medical practice as a sole practitioner; and
3. That the Respondent notify the Commission of all of his employers and all of his places of employment during the period of probation; and
4. That the Respondent perform physical examinations only in the presence of a chaperone.
5. That the Respondent fully comply with the conditions of probation imposed by the Circuit Court for Baltimore City in Case No. 1861642.

ORDERED that upon the expiration of five years from November 12, 1986, in the event that the conditions of this Order have not been violated, the Commission shall vacate the revocation, upon a petition by the Respondent, and it is further

ORDERED that in the event that the Commission determines, after notice to the Respondent and an opportunity to be heard, that the Respondent has not complied with the conditions set forth herein, the Commission shall impose the revocation, and may proceed with such additional charges as the Commission deems appropriate.

HILARY T. O'HERLIHY **MD, Chairman**
Commission on Medical Discipline

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In the Matter of
Gloria E. Danquah MD
Before the
Commission on Medical Discipline

Findings of Fact,
Conclusions of Law, and Order

Based on certain information coming to the attention of the Commission on Medical Discipline (the "Commission"), the Commission determined to charge Gloria E. Danquah MD (the "Respondent") with violations of Sections 14-504(6), (13) and (25) of the Health Occupations Article, Annotated Code of Maryland.

Appropriate notice of the charges and the grounds from which they arose were given to Respondent by letter dated April 21, 1986. A hearing on the charges was held on August 18, 1987.

Findings of Fact

Based on the evidence produced at the hearing, the Commission found that on March 5, 1987, in the Circuit Court for Baltimore City, Respondent pleaded guilty and was convicted of one felony count of obstruction of justice under Article 27, §27 of the Annotated Code of Maryland and one felony count of Medicaid fraud under Article 27, §230C of the Annotated Code of Maryland.

Conclusions of Law

Based on the foregoing Findings of Fact, the Commission finds that the Respondent has violated Section 14-504(6), (13) and (25) of the Annotated Code of Maryland in that she was convicted of crimes involving moral turpitude, that she is guilty of immoral conduct

On instruction of the Council of the Medical and Chirurgical Faculty of the State of Maryland, "Findings of Fact, Conclusions of Law, and Order" will be published in the Maryland Medical Journal.

in the practice of medicine, and that she willfully submitted false statements to collect fees for which services were not provided.

Order

Based upon the foregoing Findings of Fact and Conclusions of Law, it is this 1st day of September 1987, by a majority vote of those members of the Commission hearing this case, hereby

ORDERED that the license of the Respondent, Gloria E. Danquah MD, to practice medicine be REVOKED, and it is further

ORDERED that the Respondent may petition the Commission for a stay of revocation or reinstatement, at which time the Commission will reconsider the sanction imposed in the case.

RONALD J. TAYLOR **MD, Acting Chairman**
Commission on Medical Discipline

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In the Matter of Francesco B. Di Leo MD Before the Commission on Medical Discipline

Agreement Staying Order for Emergency Suspension

Having reviewed certain information that came to its attention, the Commission on Medical Discipline of Maryland (the "Commission"), pursuant to its authority under the State Government Article, Section 10-405, on July 21, 1987, summarily suspended Francesco B. Di Leo MD's ("Respondent") license to practice medicine in Maryland. Under the terms of the emergency suspension, Respondent is entitled to a hearing within thirty (30) days of notifying the Commission to determine if the public health, safety, and welfare imperatively requires emergency action. Subsequent to having his license summarily suspended Respondent has had a psychiatric and a neuropsychological examination. The results of the neuropsychological examination revealed no impairment. The results of the psychiatric examination revealed that if Respondent abides by the following conditions Respondent poses no imminent danger to the public health, safety, and welfare.

Conditions

1. Respondent will not use or encourage the use of psychedelic drugs, psychedelic substances, or Schedule I drugs with any patient or any person.

2. Respondent will not use psychedelic drugs, psychedelic substances, or Schedule I drugs himself at any time.

3. Respondent will participate in a drug-screening program arranged by the Medical and Chirurgical Faculty's Physician's Rehabilitation Committee. Respondent will be responsible for all expenses incurred in the drug screening.

4. Respondent will begin therapy with a psychiatrist ("therapist") selected by Respondent from a list submitted to Respondent by the Maryland Psychiatric Association.

a. Respondent agrees that his therapist will be forwarded the Consent Order, a letter dated May 20, 1987 from Jesse Hellman MD to Robert White, and a letter dated July 21, 1987 from Hilary T. O'Herlihy MD, to Respondent for his review.

b. The therapist will see Respondent for therapy on at least a weekly basis, and more often if the therapist thinks it appropriate. Respondent must follow the recommendations for the number of therapy sessions made to Respondent.

c. Respondent shall be responsible for all costs and expenses incurred in therapy.

d. The Respondent shall continue in therapy until the matter presently pending before the Commission concerning Respondent is resolved.

e. The therapist shall submit monthly reports to the Peer Review of the Maryland Psychiatric Association ("Peer Review") indicating that Respondent is attending the therapy sessions as recommended.

f. In the event that the Respondent terminates therapy prior to discharge by the Respondent's therapist the therapist shall IMMEDIATELY notify Peer Review that Respondent has left therapy without consent of the therapist.

5. Respondent shall select a psychiatrist ("supervisor") from a list approved by the Maryland Psychiatric Association as a supervisor of his practice.

a. If Respondent has a professional or personal relationship with an individual on the list, Respondent shall not select that individual.

b. Respondent will be responsible for all expense incurred by the supervisor in connection with his/her supervisory role over Respondent, including any charges made by the supervisor for his/her time.

c. The supervisor shall review Respondent's entire practice with him, this Consent Order and all underlying information forwarded to him/her by the Commission or by Peer Review. The supervisor shall arrange for, at minimum, weekly supervisory sessions with Respondent. (Respondent may code name the patients for confidentiality.)

d. The supervisor will notify Peer Review in writing as soon as the initial meeting has been held, and that he/she understands all the terms of this Agreement and has reviewed the underlying documents.

e. The supervisor will determine which cases to closely monitor in order to assess Respondent's level of competence and judgment, in light of the matters now pending before the Commission involving the Respondent. The supervisor will determine how much time each week is needed to assess

Respondent's competence to practice psychiatry.

f. The supervisor shall make monthly written reports to Peer Review assessing Respondent's practice, the reports being due on the fifteenth (15th) of each month.

g. During the time of supervision the Respondent shall limit his practice to fifteen (15) patients, unless an increased patient load is approved by his supervisor. Respondent shall inform his supervisor of any patients discharged and any new patients whom he has agreed to treat, by code identifying them.

h. The supervision will continue until the matters now pending before the Commission concerning Respondent are resolved.

6. The therapist and the supervisor shall be considered adjuncts to or investigatory bodies of the Commission and, therefore, their activities as described in this Consent Order and any records obtained by them or created by them in connection with those activities shall be privileged pursuant to the provisions of §14-510 of the Health Occupations Article of the Maryland Annotated Code.

7. Respondent will only practice psychiatry or any form of therapy from his office at 101 West Read Street, and unless approved by the supervisor will not practice in conjunction with any individual.

8. Respondent will neither advocate the use of nor use sexual contact with patients, or former patients.

9. Prior to this Order being signed by the Commission, the Commission must receive the following:

a. An acknowledgment from the supervisor that the supervisor has conducted an initial review of Respondent's practice.

b. Acknowledgment from the therapist that treatment has started.

c. Acknowledgment from the Physician's Rehabilitation Committee that a drug screening program is established and is started.

10. In the event that Respondent moves permanently or temporarily during the probationary period, Respondent shall promptly notify the Board in writing of his new address and telephone number.

11. The Respondent shall practice in accordance with the laws governing the practice of medicine in Maryland.

Order

ORDERED that when the Commission receives the documents described in paragraph 9 above, the EMERGENCY ORDER will be dissolved; and be it further

ORDERED that if the Commission receives a report from Respondent's supervisor, therapist or the Physician's Rehabilitation Committee that Respondent has engaged in inappropriate, intimate, or sexual relations with a patient; has used psychedelic drugs, psychedelic substances or Schedule I drugs with himself, a patient, or a person; that Respondent is a danger to himself or to the public safety, health, or welfare; or that Respondent has violated any conditions of this Agreement, the Commission WITHOUT PRIOR NOTICE AND AN OPPORTUNITY TO BE HEARD MAY REINSTATE THE SUMMARY SUSPENSION, provided that Respondent is given immediate notice of the suspension and an opportunity for a hearing thirty (30) days after requesting same, as provided by State Government Article 10-405(b).

HILARY T. O'HERLIHY **MD, Chairman**
Commission on Medical Discipline

Consent

By this Consent, I hereby accept and submit to the foregoing Order and its conditions, consisting of eight (8) pages. I acknowledge the validity of the Order as if made after a hearing in which I would have had the right to counsel, to confront witness, to give testimony, to call witnesses on my own behalf, and to all other substantive and procedural protections provided by law.

I further acknowledge that the Order provides that the SUMMARY SUSPENSION may be reinstated WITHOUT NOTICE AND AN OPPORTUNITY TO BE HEARD in the event that the Commission receives notice from the Physician's Rehabilitation Committee, my supervisor, or my therapist that I have engaged in intimate or sexual relations with a patient; that I have myself used or given a patient or person a psychedelic drug, a psychedelic substance, or a Schedule I drug; that I am a danger to the public safety, health, and welfare or myself, or that I have violated any of the above conditions of this agreement. I acknowledge that in the event the Emergency Suspension is lifted in such a matter, I will be given immediate notice and an opportunity to a hearing within thirty (30) days of my requesting same.

I sign this Order after having an opportunity to consult with an attorney, without reservation, and I fully understand this meaning.

FRANCESCO B. DI LEO **MD**

• • •

In the Matter of Gerald H. Fink MD Before the Commission on Medical Discipline

Findings of Fact, Conclusions of Law, and Order

Certain information having come to the attention of the Commission on Medical Discipline of Maryland (the "Commisison"), the Commission, pursuant to the Medical Practice Act, Health Occupations Article, Annotated Code of Maryland (the "Act"), §14-501, requested that the Peer Review Committee of the Medical and Chirurgical Faculty of Maryland ("Med-Chi") review the complaint received against Gerald M. Fink MD (the Respondent). Having reviewed the report of

Med-Chi, the Commission determined to charge Respondent under §14-504(3) of the Act.

Notice of the charge and the allegations supporting the charge were given to Respondent by letter dated June 9, 1987. A prehearing conference was scheduled for Thursday, July 16, 1987, and held that day.

Findings of Fact

1. At all times relevant hereto Respondent was a physician licensed to practice medicine in Maryland.
2. At all times relevant hereto Respondent was a practicing psychiatrist.
3. Respondent accepted Patient A in his practice and agreed to treat her in a therapeutic relationship.
4. During the treatment of Patient A a transference developed wherein Patient A conferred her trust to Respondent and developed emotional and sexual feelings for Respondent. Respondent identified these feelings to Patient A as transference and explained these feelings as such to Patient A.
5. During the treatment of Patient A, Respondent developed feelings for Patient A that he did not recognize to be countertransference. During the treatment of Patient A, Respondent did not recognize the importance and extent of his countertransference feelings.
6. Respondent should have been aware that his feelings toward Patient A were countertransference as he was aware that Patient A's sexual and emotional feelings toward him were a natural and understandable part of the therapeutic process.
7. A therapist must help a patient understand any transference feelings toward the therapist, and a therapist must not take advantage of these feelings.
8. The therapeutic relationship between patient and therapist does not terminate immediately or within four (4) weeks of stopping treatment. The individual is still a patient.
9. When a therapist becomes emotionally and sexually involved with a patient or a former patient, a therapist must seek a consultation.
10. Respondent did not seek a consultation. When Respondent acted on his emotional feelings (countertransference) and entered into a romantic and sexually intimate relationship with Patient A, Respondent erroneously believed therapy has terminated. This relationship lasted for several years. Respondent lived with Patient A and intended to marry Patient A.
11. When Respondent became romantically involved and sexually intimate with Patient A, Respondent still had a therapeutic relationship with Patient A.
12. Sexual activity between a psychiatrist and a patient is unethical.
13. When the sexual and emotional relationship developed between Patient A and Respondent, this relationship proved to be deleterious and damaging to Patient A, and served no legitimate therapeutic purpose. Prior to that time the therapeutic relationship had been helpful to Patient A.
14. Respondent now understands and admits that his actions towards Patient A violated the standards of practice for a psychiatrist and a physician in Maryland. At the time that Respondent became emotionally and sexually involved with Patient A he did not believe his conduct to be unethical, as Respondent believed Patient A to be a former patient.
15. Respondent sought and has undergone extensive therapy to deal with the problems that caused him to become emotionally and sexually involved with Patient A, and caused him to fail to recognize his feelings towards her as countertransference.

Conclusions of Law

Based on the foregoing Findings of Fact, the Commission concludes as a matter of law that Respondent has committed a prohibited act under Health Occupations Article, §14-504. Specifically:

> Is guilty of immoral conduct in the practice of medicine; §14–504(3) of the Act.

Order

Upon the foregoing Findings of Fact and Conclusions of Law, it is this 4th day of August 1987, by a unanimous vote of those members of the Commission on Medical Discipline of Maryland who considered this case,

ORDERED that Respondent's license to practice medicine in Maryland is hereby SUSPENDED; and be it further

ORDERED that the SUSPENSION is immediately STAYED and Respondent is placed on PROBATION subject to the following conditions of probation:

1. Within thirty (30) days from the date Respondent receives a list submitted to him by the Peer Review Committee of the Maryland Psychiatric Association ("Peer Review") Respondent shall select a psychiatrist ("supervisor") from the list and notify Peer Review in writing of his selection. In the event that Respondent has a professional or personal relationship with any individual named on the list, he will immediately inform Peer Review and another name will be substituted.
2. Respondent will be responsible for all expenses incurred by the supervisor, including any charges made by the supervisor for his/her time.
3. As soon as the supervisor can arrange an appointment with Respondent, but at least within sixty (60) days from the effective date of this order, that date being the date the Commission executes this Order, the Order having previously been executed by Respondent, the supervisor shall review Respondent's entire practice with him, this Consent Order and all underlying information forwarded to him/her by the Commission or by Peer Review. The supervisor shall arrange for, at minimum, weekly supervisory sessions with Respondent. (Respondent may code name the patients for confidentiality.)

4. The supervisor will notify Peer Review in writing that the initial meeting has been held, and that he/she understands all the terms of this Consent Order, and has reviewed the underlying documents.
5. The supervisor will determine which cases to closely monitor in order to assess Respondent's level of competence and judgment, in light of the charges the Commission brought against Respondent. The supervisor will determine how much time is needed to assess Respondent's competence to practice psychiatry.
6. During the first year of suspension, the supervisor shall make monthly written reports to Peer Review assessing Respondent's practice, the reports being due on the fifteenth (15th) of each month, starting October 15, 1987.
7. During the first year of suspension, Respondent's practice is limited to seeing twenty-five patients a week. Respondent shall inform his supervisor of any patients discharged and any new patients whom he has agreed to treat, by code identifying them.
8. After ten (10) months of active supervision, the supervisor will report to Peer Review whether he/she thinks the supervisory sessions can be reduced and/or Respondent's number of patients seen increased.
9. Peer Review will make an initial determination whether the supervisory sessions can be reduced, whether Respondent's number of patients seen can be increased and whether the supervisor's reports can be bimonthly or quarterly. Peer Review will file its recommendation with the Commission. The Commission must ratify the recommendation before any change in supervision, or numbers of patients seen becomes effective. The supervisor will proceed accordingly.
10. The Respondent shall continue in therapy with Respondent's present therapist and inform Respondent's therapist of all terms and conditions of this consent agreement.
11. The Respondent shall arrange for Respondent's therapist to submit written quarterly reports to Peer Review commencing on October 15, 1987, indicating that Respondent is making satisfactory progress in dealing with the problems that lead to his involvement and lack of professional judgment with Patient A. It is understood that Respondent has been in therapy for two (2) years and during these two (2) years has explored his relationship with Patient A.
12. The Respondent shall continue in therapy until the therapist certifies to Peer Review in writing that the Respondent is discharged.
13. Upon discharge from the therapy the Respondent shall arrange for the therapist to submit a final report to Peer Review indicating that Respondent had satisfactorily made progress in treatment and that the therapist has recommended that Respondent be discharged.
14. In the event that the Respondent terminates therapy prior to discharge by the Respondent's therapist the therapist shall immediately notify Peer Review that Respondent has left therapy without consent of the therapist.
15. One (1) year and ten (10) months after the effective date of this Order, the supervisor will submit a summary report to Peer Review indicating whether he/she is of the opinion that Respondent is competent to practice psychiatry. Within one (1) year eleven (11) months of the effective date of this Order, Peer Review will review all the supervisor's reports, and may interview Respondent and the supervisor.
16. If the reports from the supervisor and Respondent's therapist indicate that Respondent is competent to practice psychiatry, within two (2) years from the effective date of this Order, Peer Review will recommend to the Commission that the suspension be lifted. If the reports from the supervisor and Respondent's therapist indicate that Respondent is not competent to practice psychiatry, Peer Review will either recommend that Respondent continue in supervision or that the stay of suspension be lifted.
17. In the event that the Commission initially decides to either lift the stay of suspension or have Respondent continue under supervision, Respondent will be entitled to notice and a hearing, prior to the stay being lifted, except as provided below.
18. In the event that Respondent moves permanently or temporarily, Respondent shall promptly notify the Commission in writing of Respondent's new address and telephone number during the probationary period;
19. The Respondent shall not engage in the conduct that led to the charges by the Commission against Respondent;
20. The Respondent shall practice in accordance with the laws governing the practice of medicine in Maryland; and be it further

ORDERED that TWO (2) YEARS AFTER THE EFFECTIVE DATE OF THIS ORDER, the Commission will entertain a petition for termination of Respondent's probationary status and reinstatement of Respondent's license to practice medicine in Maryland without any conditions or restrictions whatsoever. At that time if the Commission determines that a termination of probation would not be appropriate, the Commission may impose other conditions of probation. If the Respondent has complied with all conditions of probation and if there are no outstanding complaints against Respondent's practice Commission will reinstate the Respondent's license without any conditions or restrictions whatsoever; and be it further

ORDERED that if the Commission receives a report from Respondent's supervisor or therapist indicating that Respondent has engaged in inappropriate, inti-

mate, or sexual relations with a patient, or that Respondent is a danger to himself, or to the public safety, health, or welfare, the Commission, WITHOUT PRIOR NOTICE AND AN OPPORTUNITY TO BE HEARD MAY LIFT THE STAY OF REVOCATION ON RESPONDENT'S LICENSE, provided that Respondent is given immediate notice of the charges and an opportunity for a hearing thirty (30) days after requesting same; and be if further

ORDERED that if Respondent violates any other term of Respondent's probation, the Commission, after notice and a hearing, and a determination of violation may lift the stay of SUSPENSION of Respondent's license or may impose any other disciplinary sanctions if deems appropriate.

HILARY T. O'HERLIHY **MD, Chairman**
Commission on Medical Discipline

Consent

By this Consent, I hereby admit the truth of the Findings of Fact, and accept and submit to the foregoing Order and its conditions, consisting of ten (10) pages. I acknowledge the validity of the Order as if made after a hearing in which I would have had the right to counsel, to confront witnesses, to give testimony, to call witnesses on my own behalf, and to all other substantive and procedural protections provided by law. I also recognize that I am waiving my right to appeal any adverse ruling of the Commission that might have followed any such hearing. By this consent, I waive all such rights and acknowledge that by my failure to abide by the conditions of the Order, I may suffer disciplinary action against my license to practice medicine in the State of Maryland.

I further acknowledge that the Order provides that the stay of suspension can be lifted WITHOUT PRIOR NOTICE AND AN OPPORTUNITY TO BE HEARD in the event that the Commission receives notice from my supervisor or my therapist that I am have engaged in intimate or sexual relations with a patient, or that I am a danger to the public safety, health, and welfare, or myself. I acknowledge that in the event that the stay of suspension is lifted in such a matter, I will be given immediate notice and an opportunity to a hearing within thirty (30) days of my requesting same.

I sign this Order after having an opportunity to consult with an attorney, without reservation, and I fully understand its meaning.

GERALD H. FINK **MD**

In the Matter of William L. Joseph MD Before the Commission on Medical Discipline

Findings of Fact, Conclusions of Law, and Order

Certain information having come to the attention of the Commission on Medical Discipline of Maryland (the "Commission"), the Commission, pursuant to the Medical Practice Act, Health Occupations Article, Annotated Code of Maryland (the "Act"), §14-501, requested that the Peer Review Committee of the Medical and Chirurgical Faculty of Maryland ("Med-Chi") review the complaint received against William L. Joseph MD (the Respondent). Following a review and report by Med-Chi, the Commission determined to charge Respondent under §14-504(3) and §14-504(12) of the Act.

Notice of the charges and the allegations supporting the charges was given to Respondent by letter dated February 27, 1986. On December 22, 1986, the State filed a Motion to Supplement the bases of the charges. Respondent filed a Memorandum in Opposition to the State's motion on January 9, 1987, and the State filed its reply on January 27, 1987. On March 17, 1987, the Commission granted the State's Motion and scheduled a prehearing conference on April 21, 1987. The prehearing conference was rescheduled and held on April 28, 1987. Following the discussions at the prehearing conference the Respondent agreed to enter into a Consent Order as proposed by the Commission.

Findings of Fact

1. At all times relevant hereto Respondent was a physician licensed to practice medicine in Maryland.

2. At all times relevant hereto Respondent was a member of the American Board of Surgery.

3. At all times relevant hereto Respondent testified as an expert witness in medical malpractice cases both for plaintiffs and defendants.

4. At no time relevant hereto was Respondent a member of the American Board of Thoracic Surgery.

5. On February 14, 1984, while under oath, Respondent testified as a medical expert, in *Hill v. Pediatric Surgery Associates, P.A.*, Court of Common Pleas, State of South Carolina, #82-4075, that he was Board certified in Thoracic Surgery.

6. Prior to February, 1986, Respondent submitted a curriculum vitae to some attorneys for plaintiffs and defendants, in response to Interrogatories, and requests in Depositions, which contained false information, as follows:

   a. Respondent graduated Phi Beta Kappa from Williams College with a B.A. in 1959 (Respondent graduated from Ohio State University in June of 1957);

b. Respondent graduated from Ohio State University, School of Medicine, Columbus, Ohio, first in his class and was a member of Alpha Omega Alpha (Respondent was not first in his class and was not a member of Alpha Omega Alpha);
c. Respondent received the Zollinger Surgical Award while at Ohio State University (There is no Zollinger Surgical Award at Ohio State University, School of Medicine);
d. Respondent was a current member in good standing of certain professional societies (Respondent had left his membership lapse).

7. There have never been any complaints to the Commission regarding Respondent's competence.

Conclusions of Law

Based on the foregoing Findings of Fact, the Commission concludes as a matter of law that Respondent has committed prohibited acts under Health Occupations Article, §14-504. Specifically:

Is guilty of immoral conduct in the practice of medicine; §14-504(3) and

Willfully makes . . . a false report or record in the practice of medicine. §14-504(12)*

Order

Upon the foregoing Findings of Fact and Conclusions of law, it is this 16th day of June 1987, by a unanimous vote of those members of the Commission on Medical Discipline of Maryland who considered this case,

ORDERED that Respondent is REPRIMANDED.

HILARY T. O'HERLIHY **MD, Chairman**
Commission on Medical Discipline

Consent

By this Consent, I hereby consent and submit to the foregoing Order and its conditions. I do not admit the truth of the charges, but I acknowledge the validity of the Order as if made after a hearing in which I would have had the right to counsel, to confront witnesses, to give testimony, and to call witnesses on my own behalf and to all other substantive and procedural protections provided by law. I also recognize that I am waiving my rights to appeal any adverse ruling of the Commission that might have followed any such hearing and agree not to contest the jurisdiction of the Commission.

WILLIAM L. JOSEPH **MD**

* In reaching these conclusions of law, the Commission has determined that it is the practice of medicine in Maryland when a medical expert in a malpractice case is retained to give his/her opinion based on the patient's records as to the standard of care required, the standard of care given, and the damage caused to the patient by the medical care rendered by another physician. In order to perform these functions the medical expert must render a diagnosis, and give an opinion as to the treatment of the particular individual in question.

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In the Matter of Gabriel K. Rubin MD Before the Commission on Medical Discipline

Findings of Fact, Conclusions of Law, and Order

Based on certain information coming to the attention of the Commission on Medical Discipline (the "Commission"), the Commission determined to charge Gabriel K. Rubin MD (the "Respondent") with violations of Sections 14-505(6) and (22) of the Health Occupations Article, Annotated Code of Maryland.

Appropriate notice of the charges and the grounds from which they arose were given to Respondent by letter dated December 5, 1986. A hearing on the charges was held on May 19, 1987.

Findings of Fact

Based upon the evidence produced at the hearing, the Commission finds that:

1. On May 30, 1980, in the New York Supreme Court for Queen's County, Respondent plead guilty and was convicted of the crime of attempted falsification of business records.

2. That on June 21, 1983, the Commissioner of Education for the State of New York issued an order revoking the Respondent's license to practice in the State of New York.

Conclusions of Law

Based on the foregoing findings of Fact, the Commission finds that the Respondent has violated Section 14-504(6) and (22) of the Annotated Code of Maryland in that he was convicted of a crime involving moral turpitude and that he was disciplined by a licensing or disciplinary authority, to wit the New York State Education Department of Board of Regents of the University of the State of New York for acts that would be grounds for disciplinary action under §14-504 of the Health Occupations Article of the Annotated Code of Maryland.

Acts that would be grounds for discipline are:

1. On August 14, 1979, Respondent issued two prescriptions for Methaqualone (Quaalude), each in the amount of sixty 300 mg tablets in the name of two separate individuals, and delivered to one of them, the other not being present. The prescriptions were intended for the use of both individuals, and were issued for the price of $500.

2. On May 30, 1980, Respondent plead guilty and was convicted of the crime of attempted falsification of

business records, and as a result thereof, Respondent was sentenced to serve six months and did serve four months in the New York City Correctional Institution.

Order

Based on the foregoing Findings of Fact and Conclusions of Law, it is this 30th day of June 1987, by a majority vote of those members of the Commission hearing this case, hereby

ORDERED that the license of the Respondent, Gabriel K. Rubin MD, to practice medicine be REVOKED.

HILARY T. O'HERLIHY **MD, Chairman**
Commission on Medical Discipline

• • •

In the Matter of Walfrido Tanyag MD Before the Commission on Medical Discipline

Order for Emergency Suspension of Medical License

Based on information received from the Peer Review Committee of the Medical and Chirurigal Faculty, and physical, psychiatric, and neuropsychological examinations regarding the medical practice of Walfrido Tanyag MD (the "Respondent"), the Commission on Medical Discipline (the "Commission") makes the following Findings of Fact, Conclusion of Law, and Order.

Findings of Fact

Based on all information known and available to it the Commission has reason to believe that:

1. Respondent is a physician licensed to practice medicine.

3. In February 1986, the Commission requested that Respondent's medical practice be investigated.

3. The Commission's request was forwarded to the Baltimore City Society (the "Society") through the Peer Review Committee of the Medical and Chirurgical Faculty ("Peer Review") in February 1986.

4. In May 1986, the Society reported to Peer Review that Respondent was not competent to practice medicine, and Respondent's knowledge of medicine was substandard. The Society recommended that the Peer Review interview Respondent.

5. Prior to Respondent meeting with Peer Review Respondent suffered a heart attack and was hospitalized for triple bypass surgery.

6. Based on the report from the Society and Peer Review's recommendation to the Commission, the Commission voted in September of 1986 to charge Respondent with incompetence.

7. In November 1986, some of Respondent's patients' records were subpoenaed to be reviewed by one of the Peer Review Experts.

8. Respondent, having recovered from his hospitalization, was scheduled to meet with Peer Review in January 1987.

9. Respondent met with Peer Review on January 7, 1987.

10. In February 1987, Peer Review submitted its report to the Commission, urging that Respondent not be allowed to practice medicine. In the event that the Commission did not suspend Respondent's license, Peer Review urged that Respondent not be allowed to practice medicine until he had completed a reeducation course.

11. In preparing the case against Respondent, the Peer Review experts noted after reviewing Respondent's records that Respondent should undergo a psychiatric, physical and neuropsychological examination since there was indication of impairment in his records.

12. By letter dated April 28, 1987, the Commission ordered that Respondent undergo physical and psychiatric examinations.

13. By letter dated May 20, 1987, the Commission ordered that Respondent undergo a neuropsychological examination.

14. The Commission received the results of the physical examination in early June, the findings of the psychiatric examination on June 19, 1987, and the findings of the neuropsychological on June 26, 1987.

15. The findings of the above referenced examinations reveal that Respondent is mentally and physically impaired.

16. The psychiatric examination found "diagnostic impression—possible multi-infarct dementia or early Alzheimer's."

17. Although the physical examination revealed that Respondent was in fairly good health considering his bypass surgery, it was noted that he was confused as to dates, had difficulty detailing his past medical history, and considerable difficulty with subtraction of serial sevens.

18. The neuropsychological report stated that the test findings were consistent with organic brain dysfunction and revealed:

Impairment of adaptive abilities.

Impairment and confusion with respect to understanding complex situations.

Impairment in the ability to logically analyze and reason.

Impairment in memory, alertness, and flexibility in thinking.

Impairment and difficulty in concentrating, maintaining concentration, and adapting to new situations.

19. To practice medicine competently and safely, one must be able to understand complex situations, logically analyze and reason, have a good memory, be able to concentrate and maintain attention, adapt to novel types of situations, and be flexible in thinking.

20. Respondent is presently practicing medicine several days a week and seeing patients during these days.

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21. The failure to be able to understand complex situations, logically analyze and reason, have a good memory, be able to concentrate, maintain attention, adapt to novel types of situations, and be flexible in thinking when one is practicing medicine poses an imminent and grave danger to the public health, welfare, and safety of the citizens of Maryland.

22. Based upon the foregoing findings the Commission has reason to believe that Respondent is

Is professionally, physically, or mentally incompetent. §14-504(4) of the Act.

Conclusion of Law

Based on the foregoing facts, the Commission finds that the public health, safety, and welfare imperatively requires emergency action in this case, pursuant to State Government Article, §10-405(b), Annotated Code of Maryland.

Order

It is this 30th day of June 1987 by the Commission on Medical Discipline:

ORDERED that pursuant to the authority vested in the Commission by State Law Article, §10-405 of the Annotated Code of Maryland, Walfrido Tanyag MD (Respondent's) license to practice medicine in the State of Maryland is hereby SUMMARILY SUSPENDED.

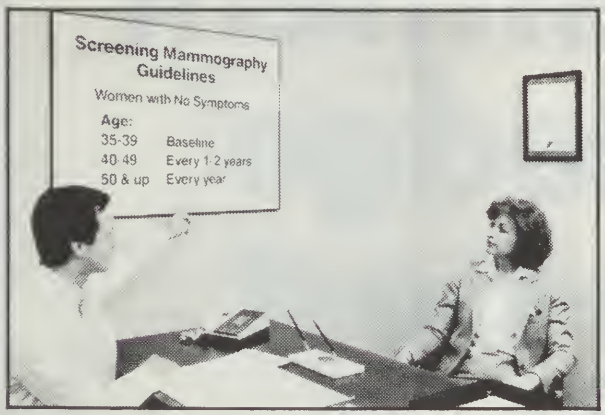
HILARY T. O'HERLIHY **MD, Chairman**
Commission on Medical Discipline

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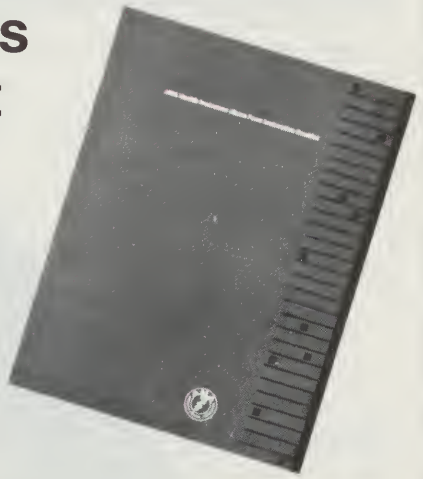
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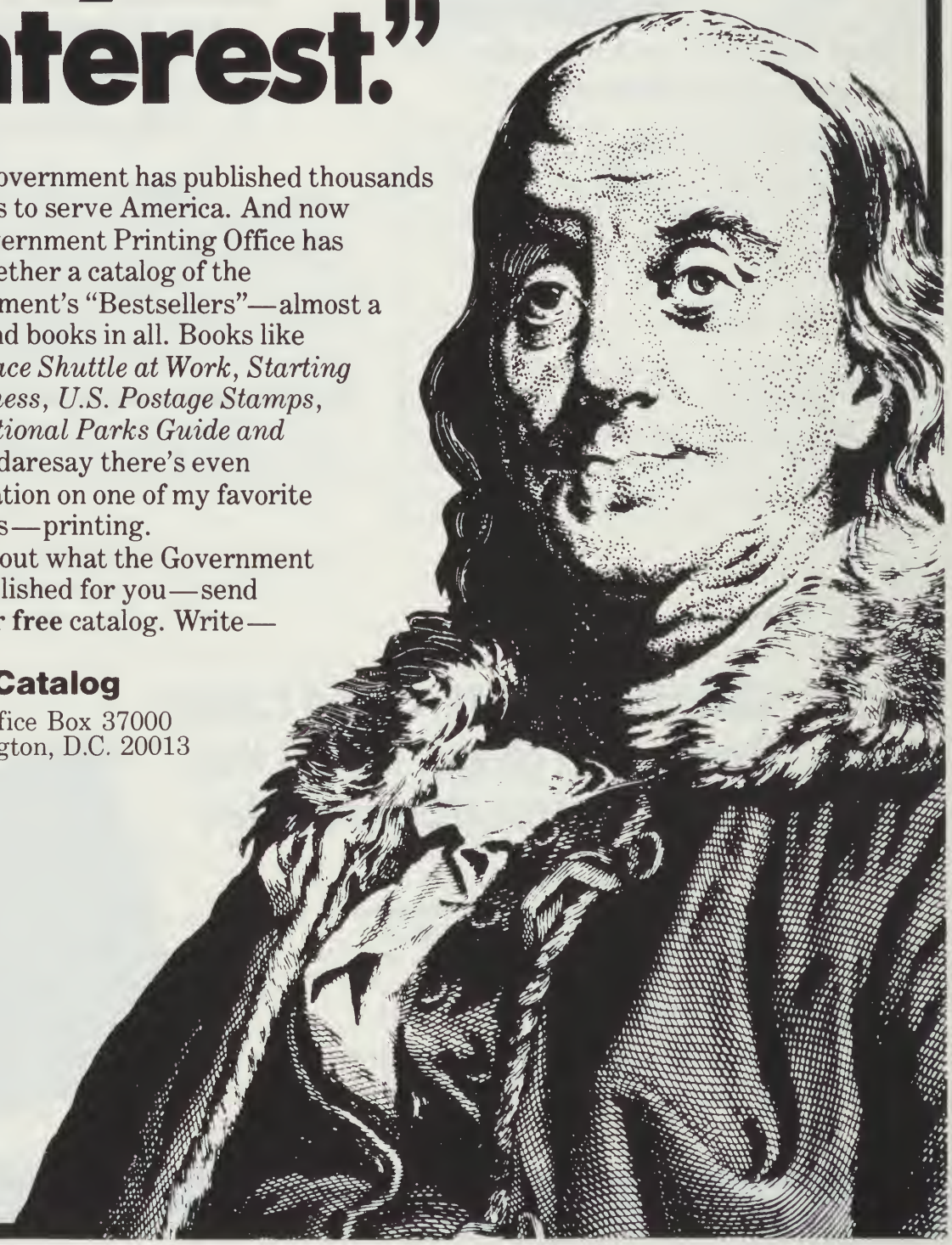


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Jan 16, and Feb 27, 1988 Neurology and Music at Maryland. Fee: $150; 9.75 AMA Cat I credits. Info: Dr. Kenneth Johnson, Department of Neurology, University of Maryland Hospital, 22 S. Green St., Baltimore, MD 21201 (301-328-6484).

Jan 19–20 He Won't Talk, He Won't Listen: Language and Behavior Problems in the Pre-School Child. Fee and credits TBA.

Jan 22 Infectious Diseases. Fee $25; 5+ AMA Cat I credits.

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Mar 24–25 Fourth National Traumatic Brain Injury Symposium "The Neglected Disease," sponsored by the Speech-Communication Disorders Program, MIEMSS, Shock Trauma Center, Baltimore. Info: R. Schwartz 301-328-6101.

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Miscellaneous Meetings

Jan 16 Mini Conference for Family Physicians—Therapeutic Update, Lord Baltimore Hotel, Baltimore, sponsored by the Maryland Academy of Family Physicians. Info: E. Barr 301-747-1980.

Feb 1–5 Fifth Annual Winter Symposium: Selected Topics in Internal Medicine, Snowshoe, WV. Info: C. Easterling, Office of Continuing Medical Education, Box 3108 DUMC, Durham, NC 27710 (800-222-9984).

Feb 26–28 Health Promotion, Disease Prevention—The Expanding Pediatric Role, Omni Hotel, Richmond, VA. Virginia Chap., American Academy of Pediatrics and the Virginia Pediatric Society, 1001 E. Main St., Ste 301, Richmond, VA 23219 (804-643-8130).

Apr 14–16 Common Hand Problems and Acute Injuries of the Hand and Upper Extremity-Chronic Wrist Pain, Park Hyatt Hotel, Washington, DC, sponsored by the National Hand Research and Rehabilitation Fund, Inc. Fee: $300, 19 Cat I credits. Info: M. Sorenson, The Hand Surgery & Rehabilitation Center, 622 Massachusetts Ave. NE, Washington, DC 20002 (202-829-1000).

May 11–15 Maryland Academy of Family Physicians Annual Meeting and Scientific Session, Sheraton Fountainebleau Inn & Spa, Ocean City. Info: E. Barr 301-747-1980.

Shady Grove Adventist Hospital, 9901 Medical Center Drive, Rockville, MD 20850. Grand Rounds:

Jan 14 Management of the Diabetic Foot
Jan 28 New Advances in Thermography
Feb 4 Update: Inflammatory Bowel Disease
Feb 11 Legislative Update
Feb 25 Heart Transplantation
Mar 24 Clinical Approach in Evaluating Male Reproductive Disorders

• • •

The Johns Hopkins Medical Institutions

All courses at the Turner Auditorium Building unless otherwise indicated. Sponsored Continued Education Activities for 1987–88. Info: Office of Continuing Education, 720 Rutland Ave., Turner Auditorium, Baltimore, MD 21205 (301-955-5880).

Mar 17–18 Imaging Living Brain Chemistry: Principles and Practice. Fee: $290, residents and Fellows $145; 14 AMA Cat I credits. Info: P. Macedonia 301-955-6085.

Apr 11–16 Pediatric Trends 1988. Fee: $500, residents and fellows $350; 45 AMA Cat I credits, 45 PREP AAP credits. Info: P. Macedonia 301-955-6085.

Diagnostic Cytopathology for Pathologists, 1988 Postgraduate Institute: February to May 1988, subspecialty residency in Clinical Cytopathology, compressed into two courses, both of which must be taken:

Feb–Apr Home Study Course A—personal reading and microscopic study at own laboratory in preparation for Course B.

Apr 25–May 6 In-residence Course B—lecture series, laboratory study, and clinical experience at the Johns Hopkins Medical Institutions, Baltimore, MD, USA.

Designed solely for pathologists who are certified (or qualified for certification) by the American Board of Pathology or its international equivalent, this institute is an intensive refresher in all aspects of Clinical Cytopathology with time devoted to newer developments and techniques, special problems, and recent applications including *immunodiagnosis and needle aspiration.* Loan slide set with tests (Course A) will be sent each

participant within the US and Canada for home study during Feb through Apr before Course B in Baltimore on April 27 to May 8. Participants *outside* the US and Canada must make arrangements to study Course A before Course B. *The entire course is given in English.*

Application and completed preregistration is advised ASAP: preregistration must be completed **before March 25, 1988**, unless by special arrangement. Info: John K. Frost MD, 604 Pathology Bldg, The Johns Hopkins Hospital, Baltimore, MD 21205, USA.

Johns Hopkins Medical Grand Rounds: audiocassettes, slides, and booklet. 30 topics and 40 AMA Cat I credits/year. Contact 301-955-3988, Office of Continuing Education, 720 Rutland Ave., Baltimore, MD 21205.

Ophthalmic Electrophysiology Technician Training Course (on-going 1-week course by appointment), The Wilmer Eye Institute, Baltimore. Info: C. M. Kearney.

The Department of Radiology and Radiological Sciences offers several courses in abdominal and obstetrical ultrasound: Courses scheduled 1/12/87–12/7/87. Info: J. Mosmiller 301-955-8450.

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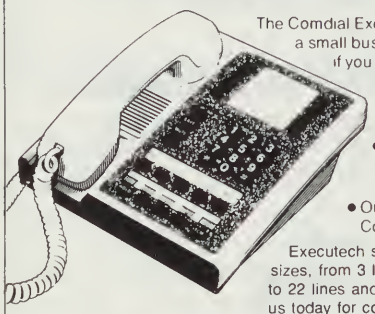
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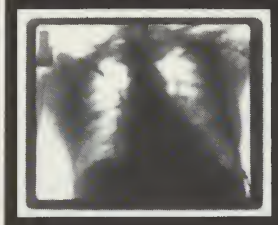
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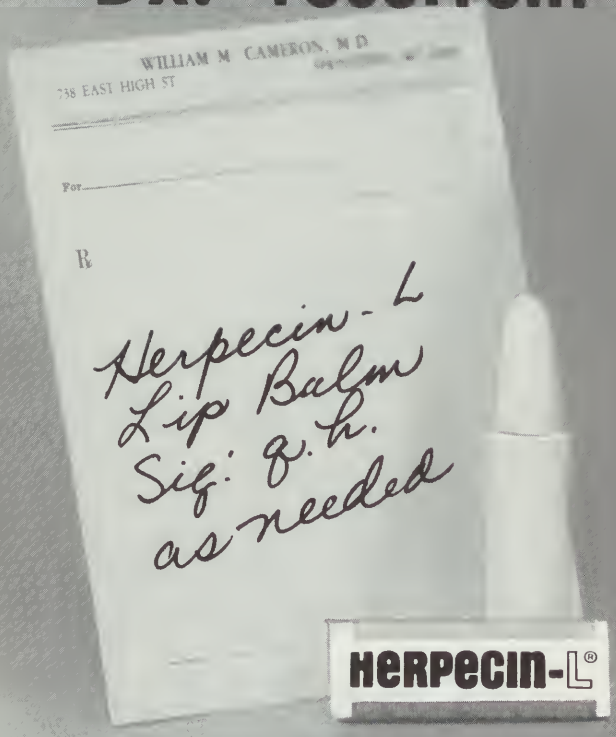
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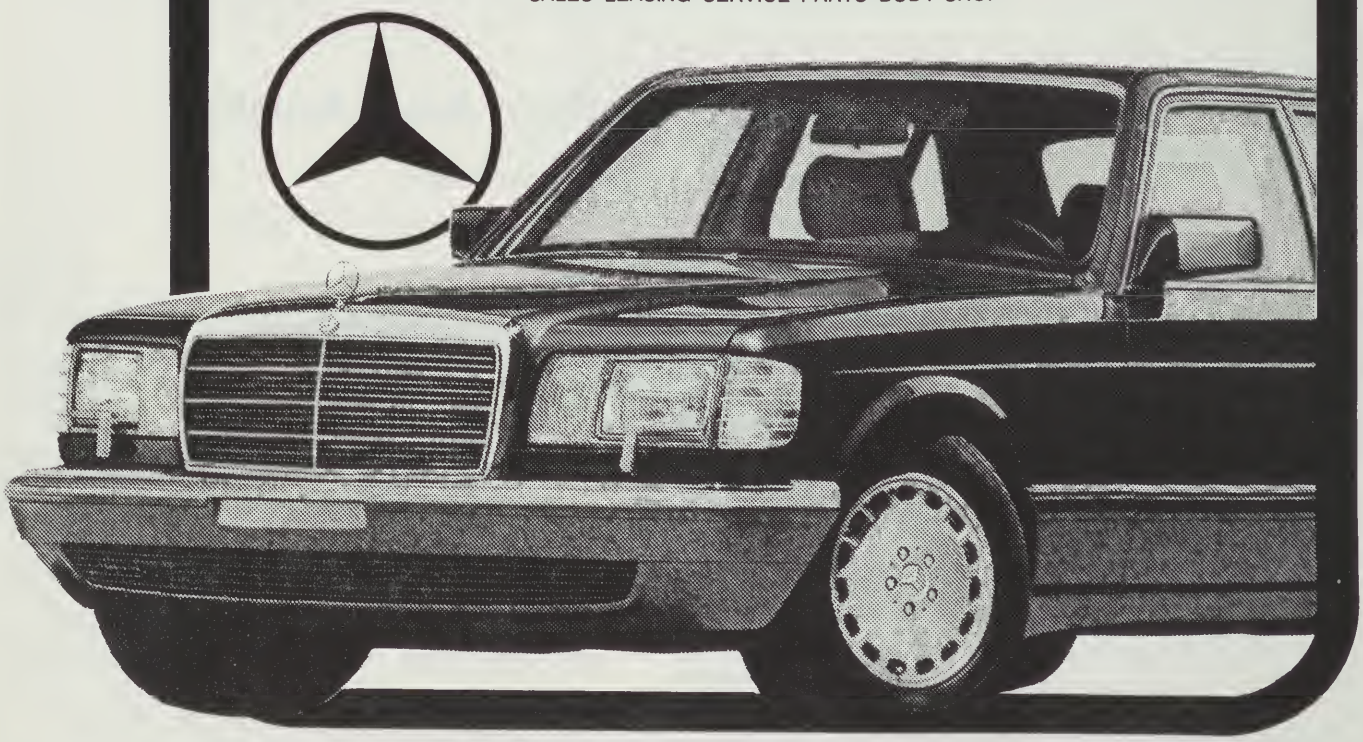
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References: **1.** Flamenbaum W: *Am J Cardiol 57*(2):38A-43A, 1986. **2.** Brater DC, Fox WR, Chennavasin P: *J Clin Pharmacol 21*:599-603, 1981. **3.** Iber FL, Baum RA: *J Clin Pharmacol 21*:697-700, 1981. **4.** Henning R, Lundvall O: *Eur J Clin Pharmacol 6*:224-227, 1973. **5.** Physicians' Desk Reference, 40th ed. Oradell, NJ, Medical Economics Company, 1986, pp. 939, 1480. **6.** Pentikainen PJ, *et al: Br J Clin Pharmacol 4*:39-44, 1977. **7.** *Losix, A Review.* Somerville, NJ, Hoechst-Roussel Pharmaceuticals, Inc., 1980.

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WARNINGS: Dose should be adjusted to patient's needs. Excessive doses or too frequent administration can lead to profound water loss, electrolyte depletion, dehydration, reduction in blood volume and circulatory collapse with the possibility of vascular thrombosis and embolism, particularly in elderly patients.
Prevention of hypokalemia requires particular attention in patients receiving digitalis and diuretics for congestive heart failure, hepatic cirrhosis and ascites, states of aldosterone excess with normal renal function, potassium-losing nephropathy, certain diarrheal states, or other states where hypokalemia is thought to represent particular added risk to the patients.
In patients with hepatic cirrhosis and ascites, sudden alterations of electrolyte balance may precipitate hepatic encephalopathy and coma. Treatment in such patients is best initiated in the hospital with small doses and careful monitoring of the patient's clinical status and electrolyte balance. Supplemental potassium and/or spironolactone may prevent hypokalemia and metabolic alkalosis in these patients.
In cats, dogs and guinea pigs, Bumex has been shown to produce ototoxicity. Since Bumex is about 40 to 60 times as potent as furosemide, it is anticipated that blood levels necessary to produce ototoxicity will rarely be achieved. The potential for ototoxicity increases with intravenous therapy, especially at high doses.
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PRECAUTIONS: Measure serum potassium periodically and add potassium supplements or potassium-sparing diuretics, if necessary. Periodic determinations of other electrolytes are advised in patients treated with high doses or for prolonged periods, particularly in those on low salt diets.
Hyperuricemia may occur. Reversible elevations of the BUN and creatinine may occur, especially with dehydration and in patients with renal insufficiency. Bumex may increase urinary calcium excretion.
Possibility of effect on glucose metabolism exists. Periodic determinations of blood sugar should be done, particularly in patients with diabetes or suspected latent diabetes.
Patients should be observed regularly for possible occurrence of blood dyscrasias, liver damage or idiosyncratic reactions.
Especially in presence of impaired renal function, use of parenterally administered Bumex should be avoided in patients to whom aminoglycoside antibiotics are also being given, except in life-threatening conditions.
Drugs with nephrotoxic potential and bumetanide should not be administered simultaneously.
Since lithium reduces renal clearance and adds a high risk of lithium toxicity, it should not be given with diuretics.
Probenecid should not be administered concurrently with Bumex.
Concurrent therapy with indomethacin not recommended.
Bumex may potentiate the effects of antihypertensive drugs, necessitating reduction in dosage.
Interaction studies in humans have shown no effect on digoxin blood levels.
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Pregnancy: Bumex should be given to a pregnant woman only if the potential benefit justifies the potential risk to the fetus.
Bumetanide may be excreted in breast milk.
Pediatric Use: Safety and effectiveness below age 18 not established.
ADVERSE REACTIONS: Muscle cramps, dizziness, hypotension, headache and nausea, and encephalopathy (in patients with preexisting liver disease).
Less frequent clinical adverse reactions are weakness, impaired hearing, rash, pruritus, hives, electrocardiogram changes, abdominal pain, arthritic pain, musculoskeletal pain and vomiting.
Other clinical adverse reactions are vertigo, chest pain, ear discomfort, fatigue, dehydration, sweating, hyperventilation, dry mouth, upset stomach, renal failure, asterixis, itching, nipple tenderness, diarrhea, premature ejaculation and difficulty maintaining an erection.
Laboratory abnormalities reported are hyperuricemia, azotemia, hyperglycemia, increased serum creatinine, hypochloremia, hypokalemia, hyponatremia, and variations in CO_2 content, bicarbonate, phosphorus and calcium. Although manifestations of the pharmacologic action of Bumex, these conditions may become more pronounced by intensive therapy.
Diuresis induced by Bumex may also rarely be accompanied by changes in LDH, total serum bilirubin, serum proteins, SGOT, SGPT, alkaline phosphatase, cholesterol, creatinine clearance, deviations in hemoglobin, prothrombin time, hematocrit, platelet counts and differential counts. Increases in urinary glucose and urinary protein have also been seen.
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Oral Administration: The usual total daily dosage is 0.5 to 2.0 mg and in most patients is given as a single dose.
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